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ABSTRACT

These two papers, one on information and library science personnel, the other on archival personnel, argue that trained professionals are the key to modern information processing, and discuss the needs of developing nations for information about training and education agencies, international exchanges of personnel, and for internationally recognized standards. They also describe the current state of manpower resources, personnel structures, and existing education and training, and make recommendations on core curricula, programs and facilities, and personnel recruitment and qualifications. Tables and appendices display the personnel structures and curricula, and there is a list of general recommendations developed at a 1974 meeting of archivists, librarians, and documentalists. Two bibliographies provide 23 and 24 references respectively. (RAA)

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PLANNING INFORMATION MANPOWER

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I. LIBRARY AND DOCUMENTATION

Manpower planning, professional structures and education and training

by

P. Havard-Williams

(with the assistance of Miss V.F. Mosley)

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1. The background

1.1 Information an essential thread in the fabric of a technological society

As civilization becomes more and more complex, information plays an ever more important rôle in it. Since the nineteenth century, the social rôle of science and technology has grown so that their consequences affect not only every man, woman and child in industrialized countries, but the evidence of science and technology is to be seen, perhaps in a rudimentary form, all over the world - the technology of the motor-car or automobile for instance, or that of the results of pharmaceutical science are present in most areas of the world. The development of a complex society has led to a growing interaction between people and their social institutions, and between social institutions and science and technology. Compare, for instance, the elements in a hospital fifty years ago and a hospital today. Fifty years ago X-rays were newly established, there were hierarchies of doctors and nurses, but there was not the panoply of technical services considered essential today, with the numerous technicians with almost equally numerous specialities and the wider range of medical knowledge practised by an increasing number and range of junior and senior medical men. The direct communication from doctor to nurse and from nurse to patient is mediated by the processes of technical services, by a numerous and complex bureaucracy and is backed up by a library and information service which, in the best and most important hospitals, acts as an integral part of the service as a whole. It in turn can call upon the information services of the entire world through the international computerized information retrieval service known as MEDLARS, one of the similar services available to scientists and technologists throughout the world.

"Information", in the context with which we are concerned, means information as derived from documents, "document" being interpreted in its widest sense to include not only archives, manuscripts, books, periodicals and reports, but also tapes, discs, films and slides. ("Information" in the sense of "publicity" is a small fraction of the whole.)

> ... we must carefully distinguish between these professional information activities and the public information services of government, which, at their best, serve to inform the public of the government's activities and to provide a medium for constructive political leadership... While these public information activities of government are not completely separable from the concerns of information policy... they must be clearly distinguished in the discussion of the bases for information policy... (1)

Indeed, information is a somewhat ambiguous term: it is sometimes used as a synonym for data, or facts, as content or even communication. Communication is a message conveyed from one person or group of persons to another: information (in our context) is a message derived from a document (in its widest sense) and understood by a person (after interaction). In an information service, in the context of science and technology, economics and the social sciences generally, it is fair to say that, as Vagianos has pointed out in a recent article, (2) "communicated data is the raw material from which information is derived" (p.87). The "information problem" was pinpointed by an American scientist Vannevar Bush in an article in The Atlantic Monthly in 1945. At that time he wrote:

> The difficulty seems to be, not so much that we publish unduly... but rather that publication has been extended far beyond our present ability to make real.

While one can hardly say the problem has been resolved, great progress has been made.

1.2 The information explosion and documentation

The problems of quantity (and in consequence quality) are indicated by the growth of scientific investigation. As Professor de Solla Price points out in Little Science, Big Science (3) "we can say that 80 to 90% of all scientists that have ever lived are alive now" (p.1). To put it another way, any scientist of 65 years or so looking back over his career will have lived through a period in which 80% to 90% of all scientific work done will have been undertaken during his lifetime. He points out that "the crude size of science in manpower or in publication tends to double within a period of 10 to 15 years ... if ... only scientific work of very high quality is counted, then the doubling period is drawn out so that it approaches about 20 years" (p.6).

Professor de Solla Price states too that while in the seventeenth century there were relatively few scientific men who could be named and counted, there are now in the United States alone more than a million people with degrees in science and technology. The same message is found in the recent report by G. Anderla (4) for the OECD. Anderla sees the problem in terms of information: the quantity of information and of the numbers of scientists and technologists is of course directly related to the quantity of information. Anderla states:

> ... the upward revision of estimates yielded by our earlier investigations indicates that in 1985-1987, six or seven times the present volumes of new information will be produced, and that the stock of information-knowledge will be about 120-150 million documents of widely varying types ...

Owing to factors beyond the increase in the numbers of scientists, Anderla sees a still greater increase in and automation of information towards the end of this century. The possibilities offered by the development of the technology of information itself will then be vastly more complicated than they are today.

The change in the quantity of scientific and technological work done has been matched by a change in scientists' and technologists' conditions of work. While the lone scientist in his laboratory is still not unknown - a recent example of the traditional lone work was Professor W.N. Benson FRS of the University of Otago, New Zealand who retired in 1953 - most science now is "big science" with workers in teams, and specialization within the teams. Part of this specialization has led to the establishment of the information scientist as part of the team. While the "invisible college" notion of scientists communicating with their peers in the field is a valid one, it is still true that the literature has to be searched, and even the guides to the literature have to be interpreted as they become more complicated in layout and therefore more difficult to use. This is even more true with computer-based services where the information scientists themselves need to be trained in order to make economic and effective use of the services. And these services themselves become more important as scientific effort is more and more diffused throughout the world. The sheer mass of material and its diffusion remain a problem for the average scientist in any field.

While the USSR, for instance, started later than much of the rest of Europe, it is now an exceedingly important contributor in the field with a growth rate above average. China also will increase the extent of scientific activity still further in addition of course to the numerous smaller countries who are also increasing their output. Looked at in another way chemists are now producing 379,048 (1972 figures) (5) papers, patents and reports per year, an increase of 8.2% over 1971, and current projections indicate a continuing annual increase of similar magnitude. There are something like 35,000-40,000 scientific journals now published and hundreds of thousands of government reports are issued yearly in addition to those thousands produced in industry and commerce. In the field of

...ly published material, "Asia now accounts for almost a quarter of the world's book production, with Japan and India both amongst the first six producers in the world" (6).

This expansion is not only affecting science and technology. Social science material is growing as fast if not faster than science material. One has only to think of the various forms of publication or records to be aware of the growth of social science literature - the increase in government publications not only in the industrialized countries but also the widely spread increase in developing countries in addition to the numerous contributions to the "grey" literature of the report world.

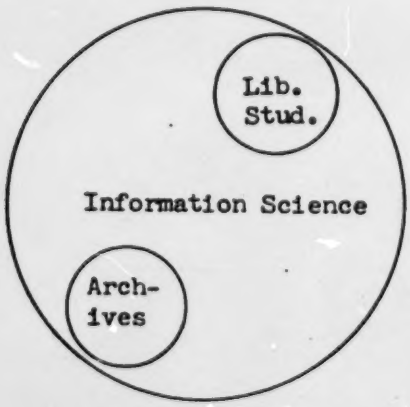
Education has been a particular growth area, of which the effect is seen in the development of many documentation centres in this field including those initiated by Unesco.

1.3 The changing rôle of documentary information suppliers

The quantity of information and the complexity of modern knowledge transfer has led to the growth of information science and of library studies or library science. As Anderla has mentioned in his report on Information in 1985,

> Notions such as information and information transfer, like all complex and multiform phenomena, cannot be defined in their entirety, nor can their diversity be assessed, by direct means. Their real nature can be grasped only through certain indirect indicators or quantitative indices and through a series of qualitative attributes (p.9).

It has been suggested that defining library science is rather like a cat trying to define a rat - it cannot, but it knows one when it sees it. Both library studies (or library science in the United States) and information science are swiftly developing subjects, and so the relation between them is in a constant state of change. There are those who would see library studies (and archive studies) as a part of information science, and those who see library studies (and archive studies) and information science as overlapping disciplines.



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In a recent article on the Training of Information Specialists in the USSR, A.I. Mikhailov (7) defined information science (which he, following Eastern European terminology calls "informatics") as a new scientific discipline "concerned with the patterns and general properties of science information as well as the laws governing all communication processes, including those of science-information activities".

2. Manpower

2.1 The scarcity of human resources

Manpower planning in relation to librarianship and information work and documentation has become an issue only since the 1960's. After a period of a dearth of workers in these fields - which still exists in many countries, in particular the developing countries of Africa, Asia and Latin America - in the United States and the United Kingdom, the profession and the employers have become concerned about the number of young entrants coming into the profession and about the structure of the profession itself. The experience in these two countries is important, because they have two of the most developed library and information systems. In the fifties there was considered to be a shortage of suitable candidates both for librarianship and for information work, and training agencies were encouraged to expand. By the late sixties, there was concern that there would be too many entrants to the profession and steps were taken to cut down the intake. Archives studies have perhaps been more fortunate, since the field is much smaller and training is still more closely related to an "apprentice" type training. Whether manpower is scarce or plentiful, the importance of forward planning can hardly be gainsaid. Employers, professional associations, governments all over the world have come to appreciate the importance of making the best use of the "human stock" available whether this be in the industrialized countries or in the developing countries. The task of the librarian or the information scientist is today an extremely demanding one in which high academic qualifications are necessary as a basis on which to add advanced professional education, together with the fundamental qualities of adaptability, versatility, tact and patience, an ability to get on easily with others and a facility to appreciate detail and accuracy. As Mr. Farradane pointed out in a contribution to the Rome Conference on the training of information specialists:

> ... the desirable characteristics of an information scientist are many, and their combination will be rare, fortunately specialization and the division of tasks makes it possible to require only some of the characteristics at one time in one person ... one must look for that touch of enthusiasm, perhaps for that sense of excitement for what is often a sort of detective work in tracing information, the trait of persistence and, above all, a respect for accuracy. (8)

Information scientists (and librarians) as Farradane indicates should be interested in widening their knowledge, be able to read rapidly with quick comprehension, to write well with a good clear style and be able to think clearly and logically. This is paralleled by the third stage of what Harold Lancour sees as the three stages of librarianship (9), this third stage he regards as the teaching or exploitation stage, following the long period of custodianship (reflected in the title of "Curator" or "Keeper" still found in many national libraries). No longer can the librarian or the information officer be a self-effacing modest creature hidden by the books - a view of the librarian sometimes still held in countries where library and information services are not contributing to the full potential of the scientific, educational and cultural development of the country. With the development of electronic data processing, depth classification demanding real subject knowledge, specialization both in terms of subject and of function not only in national, academic libraries but also in the larger public libraries, as well as in colleges and polytechnics, the whole concept of library and information service provision has broadened, not only developing within itself, but also joining up with computer science, social studies and the whole range of subjects in which there may be bibliographical and information inquiries. Information science, and library studies, are now characterized not only by their "core" but also by their interdisciplinarity, as has been pointed out by Asheim, Hayes, Saunders and Saywell in their study of the state of library science education in Ontario in 1972 (10).

In a series of reports on library management, Wasserman and Bundy assume that active, innovative management is required in librarianship and a whole series of articles reflect this view, including a recent one by D. Mason (11). In this context, it is not surprising that where scientific information and library services contribute at a high level to the development of a country's resources, where the standing of these professions is high, the rewards are correspondingly high and the career expectations of those in them can be compared with those of other advanced professionals.

2.2 Competition with other professions

As staffing costs are likely to exceed 50% of recurrent running costs of information or library services, attention has therefore been drawn to the necessity for the economical use of the "staff stock" both in financial terms, and in terms of the use of limited human resources. In information science and librarianship both in advanced societies and in many developing countries (as in Nigeria for example, where library services are important and Brazil where the profession has gained its status) employers are looking for the same type of entrant as other professions. Education and training have, therefore, to be similar to those for other professions, as do the pecuniary rewards.

2.3 Manpower and recruitment patterns

Allied with the increased stature of information scientists and librarians has been a change in the method of control of entrants into these professions. Where this has not been subject to some kind of administrative control, it has often depended in the past - and still depends in many countries - on the acceptance of "apprentices" who would work under supervision. In the field of information science, scientists who have seen the potentialities of information work have usually transferred from undertaking research work in the laboratories, and few have seen the necessity for professional education as information scientists. However, as the subject has become more complex, and the computerization of information services has become increasingly prevalent, the leaders in the profession have seen the importance of elaborating appropriate professional educational programmes. In libraries, "apprentice librarians" traditionally worked under supervision, took the necessary professional examinations and passed, as posts became available, into the professional ranks of the library personnel. This has been broadly true of the European pattern of training for senior posts in the learned libraries - and still is in a number of European countries. For example, the training for university library work in Norway and Sweden is always carried out "in-service".

At its extreme, it has been especially characteristic of the British pattern, both in the United Kingdom and in the Commonwealth. In public libraries, junior assistants were appointed who qualified progressively over a period of years through the examinations of the Library Association, and at the same time gradually acquired the skills necessary for promotion through the ranks of the profession. Entry to the profession was thus controlled by the senior members of the profession who recruited, encouraged and helped the professional formation of the brightest and most able. Even in North America, though at first glance the pattern looks remarkably different, the basic situation was sometimes not dissimilar. Students often took posts in a library; the most apt were encouraged to take courses in library science, so that once qualified they also could take their place among the ranks of the professionals. Surveillance of entrants therefore was, there too, often in the hands of senior members of the profession, however informally, even though the library schools in the last resort were the formal educators. By the 1960's this system had completely broken down (a) because of the considerable growth in the profession; (b) because of the spread of higher education; (c) because of the increased "professionalization" of librarianship which emphasized the importance of ...

professional education at a university or other institution of higher education as the necessary preparation for a career, in additional to practical experience in a library.

The library schools also multiplied. The apprentice pattern was completely unable to provide the numbers of young people necessary to fill the available posts: shortages of candidates were reported wherever there was no artificial restriction of demand. Hence the response of the library schools was to expand and provide the necessary manpower. In North America this was achieved partly by the expansion of existing schools and partly by the foundation of new ones. For example, in Canada, the foundation of new schools doubled their number (from four to eight) and has now produced a glut of new entrants to the profession. In Australia, the foundation of new schools at the recently established Colleges of Advanced Education is replacing the old apprenticeship system with professional examinations organized by the Library Association of Australia - here again new schools proliferate.

In Europe, information science has not been well served in terms of professional education. In France, there is now the Institut National des Techniques de la Documentation at the Conservatoire National des Arts et Metiers. There is also the activity of the school at the Institut Catholique. Librarians are also trained at the Institut Catholique in a two year non-graduate course. The principal institution for the education of librarians is the Ecole Nationale Supérieure des Bibliothècaires. Library education is widely available in Germany, Holland and Scandinavia, as it is in Eastern Europe, but education for information scientists is less well developed, and is often not of a very satisfactory standard, though improvements have begun. In Czechoslovakia, for instance, a course was started in 1972 towards the training of information workers in biology and medicine, in co-operation with the Prague Medical School (12).

The German Democratic Republic trains workers specifically in information science at the Professional School for Scientific Librarians in Berlin, the Central Institute for Information and Documentation, also in Berlin, and also at the Institute of Information Science at the Technical University at Ilmenau. The German Democratic Republic is perhaps one of the most organized countries in Europe in the field of education for information science. The Federal Republic of Germany has no courses specifically for information scientists, and other countries tend to add the discipline to existing library education programmes rather than to teach it separately.

The problem of developing countries is again different. Here there is added the basic problem of providing training for <u>all</u> the professions with inadequate resources, as well as the problem of providing an appropriate primary and secondary educational system in order to support a suitable system of higher education for the country. Much has been done to ameliorate the position in developing countries by sending trainees abroad to one or another of the countries with advanced library or documentation systems and/or training facilities. This trickle of pioneers has, in many countries, blazed a trail which has led to the foundation of library and documentation services. However, these limited training schemes, frequently of a pilot nature, are insufficient for the total needs of a developing country. Thus there has been a tendency in the developing countries to establish new library schools, frequently manned by expatriate staff who have sometimes naturally brought their own national preoccupations with them, a result not always to the benefit of the receiving country.

Education and training for librarianship and documentation has to be seen to be relevant to the needs of the country in question - and not merely to "developing countries" as a whole; for the needs of each developing country are as varied and as special as those of each of the developed countries which have fully developed

library services and the systems of library and documentation education. The planning of manpower for librarianship and documentation (and indeed for archive services) has to be undertaken in relation to the needs of each country individually, even where education for library, documentation (and archive) services has to be arranged on a regional basis and indeed this is an additional factor to be taken into account in manpower planning.

2.4 Manpower planning

In the context of a modern scientific and technical society there can surely be no question that every country needs and wants a properly established information network ranging from the national library, through university and college libraries of varying grades and sizes, with appropriate information facilities, school libraries to train the future citizens of the country, public libraries, government libraries to provide information for the machinery of government both at the national and the local level and both for the politician and for civil servants. As a very rough guide to service, one might postulate that any library should be able to meet 90% of the demands made upon it, using the other facilities of the country (or of other countries) to meet the remainder of the demand. The foundation of an appropriate infrastructure of library, documentation and archive services is, therefore, held to be an essential component of any modern society. In addition, one must also postulate the necessary human resources to provide the service. What is important about manpower planning is that it indicates an attempt to foresee the demands both of the present and of the future and to plan the education and training needs accordingly. Initial education and training, however, are only the beginning of the problem, for a proper programme of manpower development is also essential so that best use can be made of the resources. While one cannot be sure that one's predictions and planning will be fulfilled, planned prediction is likely to produce a result more acceptable than the haphazard method of leaving planning piecemeal to, for example, local or professional bodies alone. Governmental involvement is a sine qua non, though in some countries, this will be at regional level. One of the problems in planning for local elements in a national plan (where such bodies as universities, colleges and district councils are not directly controlled by the central government) is that there is a gap between government planning, or national planning (where the central planning is done other than by a government body): the need for X number of posts may be established, but the actual implementation of positions may be in the hands of bodies other than those of the government. Theoretically, a central planning body may take a standard such as that of the International Federation of Library Associations as an overall indication of national need, but in the budget making, library finances may have to compete with transport, water supplies, or drainage where for the present the need may be greater.

2.4.1 Manpower planning and information services

Manpower planning has arisen particularly in the field of industry and commerce where goals are relatively easy to define, i.e. improved production or increased profits. In the field of the public services, it is more difficult to define goals in detail, though obviously it is easy to measure effectiveness in terms of days lost in industry through sickness or absenteeism, or houses produced per year for the population, or healthy babies born per annum. In the cultural field, it is more difficult still. We can point to more secondary schools with successful examination results, or more graduates produced per annum, but are we thereby answering the real questions about education? In documentation services allied to a production process, it seems easier to provide the necessary objective goals for a successful service (e.g. to provide the information for better production processes, quicker treatment, and, therefore quicker turnround for patients in a hospital), but the actual quantification may still prove relatively difficult. Magson (13) in an industrial documentation and library service has estimated that the service saves about 50% of the

costs in research or production based on the time it would have taken research or production staff to find out the necessary information for themselves. With the advent of "big science", the view that it is cheaper to do the work over again rather than do a literature search is no longer held to be true. The setting of objectives for public libraries is a much more difficult exercise, since there is considerable difference of opinion as to the goals in different countries and even if agreement could be reached, there would be difficulty of quantifying their realization. In a survey of London libraries Brian Groombridge (14) gave some idea of how libraries were fulfilling their rôle in London, but while quantifying certain factors, e.g. age, sex and numbers of borrowers, usage of libraries, satisfaction with the service or reasons for non-membership, it did not tell librarians, at least, very much more than they already knew about their clientele. In general terms however, it is possible to set objectives for public libraries within a certain context, and judge their performance in terms of those criteria. What is important is that the leaders in the profession, i.e. the top management, understand the objectives and their implementation and participate fully in the formulation and implementation of manpower policies

There is a need for a central planning agency to consult with the appropriate bodies to provide an overall national strategy for the national documentation, library and archive services. This will need to be defined according to the objectives of the overall infrastructure, on the basis of the appropriate standards, e.g. the Standards for public libraries of the International Federation of Library Associations, the Standards of provision for academic libraries of the Deutsch Forschungsgemeinschaft, etc. Any national plan of this kind will depend not only on the goodwill of those in government but also on the co-operation of those who operate the documentation services and libraries of the nation. Planning for documentation services is more difficult than for library or archive services since much documentation or information work is conducted by a number of small units, which in many countries may be in the private sector. What is necessary are regular surveys of documentation centres, libraries and archive units, with censuses of personnel, collections, accommodation, etc. following the lines laid down by the Unesco recommendation concerning standardization of (15) library statistics, etc. This will give a firm initial basis for national planning, provided the information gives adequate detail on the different levels of staff.

2.4.2 Manpower planning and the national infrastructure

The main aim of manpower planning is to secure an appropriate supply of people to meet the needs of the national infrastructure. Its basis is, in fact, relatively simple: it involves the estimation of expected losses; future needs and the planning to meet these needs after taking account of the existing "stock" of human resources. Good personnel histories are essential, giving information in detail about age, qualifications, experience, courses attended and other relevant information. All this needs to be seen in the context of the whole activity of the national organization. As B.R. Morris points out in an influential article on "An Appreciation of Manpower Planning" (16):

> As a framework for discussion of manpower specifically, it is generally helpful to visualize an organization as a "system" interacting with an environment - an "open" system, there. Similarly, people with the organization form an open sub-system...

The author makes the additional point that it is necessary to consider the total skill of the staff available in terms of their experience and individual development rather than concentrating merely on the initial training of replacements. In the rapidly changing techniques of today's library and documentation services, this kind of approach is essential in order to increase the adaptability and

inventiveness of the human stock to cope with the increasing demands of the complex modern documentation centre or library service. This in itself requires a flexibility of approach which can only be found with a proper regard to the need for co-operation and consultation. As Mr. Morris points out:

> ... in respect of jobs we have to determine the numbers and skills needed, the organization structure appropriate to their effective discharge, the nature of apposite authority structures or accountability; as regards people, it is necessary to define the nature of career structures and corresponding promotion rates, of selection standards and methods, of appraisal procedures and of rates of recruitment in line with the tolerated flows in the system ... Decisions in areas like these design the future shape of the organization...

The important lesson to be learned from all this is the necessity of regarding the national personnel structure in the long term as a system.

The importance of information, therefore, in controlling the management situation is crucial. There is a danger in this kind of outlook that quantitative questions will predominate, and that numbers of staff, of grades, of kinds of activity will obliterate the importance of qualitative assessment. The quality of judgement among top management including civil servants, librarians, etc. is extremely important so that the interpretation of quantitative data is undertaken with an overall understanding of the aims and objectives of the system.

To achieve ordered change, there must be a clear statement of aims and objectives not only of the system as a whole, but also of the various sub-systems which go to make it up. Few libraries have reached this stage of development in terms of a management programme and a good deal of work needs yet to be done at this level before one could lay down appropriate procedures for the world at large.

(a) Manpower planning - United Kingdom

The British Department of Education and Science which is responsible for all kinds of libraries in the United Kingdom, has also been concerned with manpower problems in the field of librarianship and information science or documentation. In 1968, the Library Advisory Councils for England and Wales received a Report on the Supply and Training of Librarians (17) from a Committee which had looked at the estimates of future demand for places in full-time schools of librarianship and considered also the educational and training needs of librarians. This report examined trends in recruitment and employment in various types of libraries and recommended an overall national policy for entrants into the profession. At the same time, about 1,100 students were completing courses successfully each year, and the Committee recommended a gradual increase to nearly 1,500 in 1982. The methodology of the Committee, although relatively elementary, has some interest, because so many countries are likely to have similar information to analyse. It is improbable that many countries have more and many will certainly have less. The Committee calculated the average working life of librarians, allowing for women who finish employment on marriage, those who continue to retirement and those who return to work after raising a family. Allowing for various social factors, it was estimated that, from 1969 onwards, the average working life of a librarian would be 16.06 years, with an equivalent annual wastage of 6.23%. Further data on which the Committee based their estimates of future needs for librarians included the calculation that there should be one professional librarian to 6,250 of the population (plus an allowance of 5% for additional posts above the establishment). Further estimates are given for the manpower needs of various types of libraries with calculations for both graduates and non-graduates. Account was also taken of students coming from other countries, qualified British librarians going to work overseas and staff

of library schools. On the basis of these calculations and assumptions, the Committee estimated the need for librarians to be as follows:

Year	Graduates	Non-graduates	Total
1968	403	697	1,100
1969	405	702	1,107
1970	417	721	1,138
1971	445	776	1,221
1972	457	794	1,251
1973	469	812	1,281
1974	480	832	1,312
1975	482	842	1,324
1976	442	825	1,267
1977	460	850	1,310
1978	470	867	1,337
1979	480	885	1,365
1980	496	912	1,408
1981	513	971	1,484

The actual figures of students completing courses successfully for 1970-1972 are as follows:

Year	Graduates	Non-graduates	Total
1970	456	824	1,280
1971	569	703	1,272
1972	663	658	1,321

These figures form part of a continuing series of surveys monitored by the Libraries Division of the Department of Education and Science, and the results are published regularly in the Library Association Record (18).

Over the three years in which these surveys have so far been taken, certain trends are becoming obvious. Of particular relevance is the upward trend in numbers who have not obtained employment four months after completion; 77% of December 1969's output had jobs, only 66% in Summer 1972. Numbers leaving the profession are also rising. Firm conclusions cannot always be drawn as, for example, geographical limitations placed by job-hunters may distort the figures, as may the relatively small numbers often involved. It is, however, interesting to note that, looking at the figures very broadly, the downward trend in employment is less marked amongst first degree students and post-graduates - perhaps further proof of the move towards a graduate profession. The current position is, therefore, that the number of British students successfully completing their studies and coming on to the labour market in the field of librarianship and documentation is slightly in excess of the number needed. This is indicated by the article published recently in Aslib Proceedings (19) by E.M. Broome. He indicates the complications that have arisen since the Committee reported in 1968. Instead of a straight division between graduate and non-graduate, there are now a variety of ways in which to qualify. In addition to the two year course and the post-graduate course, there are bachelor's

degrees of both three and four years duration and master's degrees. In 1971, "it was decided to make a start on the development of a model (or equation) and the collection of data required for manpower forecasting". In 1972, the first national census of librarians and information workers was taken in the United Kingdom, again by the Department of Education and Science, to ascertain the number of posts and the existing stock of manpower. When the results are known, the number of posts for qualified librarians and information scientists as at 31 March 1972 will be known, and broken down as follows:

Graduate librarians and information scientists;
Qualified librarians (ALA or first degree);
Graduates without library qualifications;
Other qualified staff, such as archivists;
Trainees;
Other non-manual staff.

Data will be provided relating to age and sex structure, so that it will be possible to estimate wastage by retirement and death. Other work is also on hand to examine various manpower problems both in the university library field and in the public library sector. The Cambridge University Library Management Research Unit (20) has done some work on manpower analyses in university libraries although they have found that libraries do not keep the full employment records so essential to this kind of investigation. A unit under the control of the Local Authorities Management Services and Computer Committee is also examining manpower problems, particularly necessary in the light of the recent local government reorganization.

(b) Manpower Planning - Nigeria

The problems of manpower assessment in a developing country are shown in Nigeria's High-Level Manpower 1963-1970 (National Manpower Board, Manpower Study No. 2, 1964)*. This is a report of the Manpower Board which was published after examination by an International Seminar on Manpower problems in Economic Development with special reference to Nigeria, 1964, whose comments are taken into account in the report. The Seminar recommended that estimates of future manpower needs should be based on the expected growth of wage-earning employment. With a natural income growth of 4% it was estimated that total employment would increase at 2% per annum and that the demand for high-level "Senior Category" manpower would increase by 8%, "Intermediate Category" at 12% with an additional allowance of 3% for wastage. It was thought that this method was relatively simple and valuable especially where no elaborate statistical data existed. These rather broad assumptions, based on the known growth in other developing countries were checked with returns from employers: these gave a 10% annual increase for the senior and 13% for the intermediate category - a correlation sufficiently close to take the proportions suggested by the International Seminar of 8% and 12% respectively. Since there was also the policy of replacing expatriates, which represented 40% of the Senior Category and 5% of the Intermediate Category, upper and lower targets were set, depending on whether no expatriates were to be replaced or on whether all were to be replaced:

> In this way, the gap between the lower and upper limits provides a working safety margin in so far as the rate of out-turn of trained personnel is concerned. The lower limit accordingly indicates the lowest target which must be attained to sustain the economy and ensure current or assumed growth: any out-turn over and above this limit will largely go into replacing expatriate personnel. The upper target indicates the point beyond which investment in education and training may, from the short-range economic point of view, constitute at present, a possible waste of resources. (p.13)

* We are grateful to Mr. Aje for obtaining a copy of the document for us.

In the light of these procedures and assumptions, the following data are presented for librarians and archivists:

Employment of High-Level Manpower 1963 - Librarians and Archivists

	Public Authorities			Private Authorities			Total			Total Employed
	Nig.	Xpt.	Vac.	Nig.	Xpt.	Vac.	Nig.	Xpt.	Vac.	
Senior Category	52	16	23	-	1	-	52	17	23	69
Intermediate Category	80	-	30	1	-	-	81	-	30	81

Nig. = Nigerian Xpt. = Expatriate Vac. = Vacancies

Management requirements by employers 1963-1968

	Actual	Additional	Corrected Total
Senior Category	69	185	195
Intermediate	81	318	330

Out-turn of high-level manpower - librarians and archivists

	Total
Senior Category	68
Intermediate Category	75

Estimated targets

	1968	1970
Senior Category	400	450
Intermediate Category	600	750

Additional Needs

	1968		1970		Out-turn	Shortfall 1963-1968	
	Lower	Upper	Lower	Upper	1963-1968	Lower	Upper
Senior Category	300	350	400	450	102	200	250
Intermediate Category	500	500	650	700	75	450	450

Of course, these figures are firm tables including estimates for all the principal professions and have to be seen in the light of manpower needs of the nation as a whole. These needs would not match up to the standard of one professional librarian to 6,250 of population analysed in the British inquiry nor indeed should they be expected to at this stage of development. Obviously, however, the standards found in developed countries need to be aimed at in due course. The important contribution made by the Nigerian report is that a methodology is given in broad terms for a situation in which many classes of detailed statistical data are lacking, but nevertheless a gross lower/upper target figure can be given for individual professions, including documentalists, librarians and archivists.

The manpower studies and the situation in the past few years in the United States and Canada where too many library science graduates have been produced draws attention to the importance of balancing recruitment and employment.

Library science, information science (and archive) education and the institutions to provide it must be seen as part of the total system of education and also as part of the total professional system. It is not a mere question of professional education - it is also a question of level. The danger is that because post-graduate courses are more prestigious than undergraduate courses and undergraduate courses than diploma courses then potential leaders and seniors will be produced at the expense of those who will man the circulation desks, check the books in and do other routine duties. All levels are needed, but it is important that the quantity as well as the quality is planned.

It is in this connexion that staff records become so important in libraries so that accurate returns can be made to manpower surveys. But, in this field, there is also a real rôle for a strong professional association. One of the factors that has helped in the continuing monitoring of the employment of British librarians is the existence of statistics at the Library Association headquarters, which works in close collaboration with the government department concerned. Thus in this case the profession is intimately involved in its own future.

Standards as already reported in the interim Unesco report, Standards for Library Services by F.N. Withers shortly to be published in a final edition, the new Standards for Public Libraries (21) published by Verlag Dokumentation for the International Federation of Library Associations and standards published by the various national associations, particularly those of Germany, Canada, the United Kingdom and the United States will be of assistance in determining proper levels, for instance of staff provision, and can therefore serve as a basis for the calculation of future numbers of librarians required. In countries where there is an extreme shortage of documentalists and of librarians, as, for instance, in Germany and Eastern Europe, care must be taken to establish or expand institutions of higher learning, or middle rank institutions so as to produce the right proportion of highly skilled and intermediate librarians and documentalists. The proportion of very highly skilled, highly skilled intermediate staff and (to a lesser degree) clerical staff has to be decided partly in relation to the conditions obtaining in different countries, but standards of provision elsewhere can be a guide. The importance of forward planning is indeed to attempt to foresee the problems which will arise. An important element in this will be the estimation of unforeseen needs: in France, for instance, at the present time, plans have been made for 4,000 documentalists in the schools by 1980. Professional education needs must take account of such a situation, and some forward planning must be to provide the necessary facilities. It is recommended that regular surveys of documentation centres, libraries and archives units, with censuses of personnel, collections, accommodation, etc., be carried out and that in the light of these surveys already recommended, planning of manpower resources and the forecasting of future needs should be considered at national level by the appropriate government agency in consultation with the profession and other interested bodies. Regard should be had to international and other appropriate standards where they are applicable.

2.6 Forecasting techniques and the use of manpower

Sophisticated techniques such as those used in industry are unlikely to be operative in the field of librarianship and information science for some time. Nevertheless, with the interest of industry, commerce and government in manpower planning, it is important that documentalists, librarians and archivists are aware of the techniques and of the importance of monitoring the human resources in the profession. The experience of the United Kingdom and Nigeria show the possibility

of a relatively simple method of forecasting. More sophisticated methods, it is hoped will bring greater accuracy, but it is important to bear in mind that manpower needs have to be seen in the context of a national plan or something like it. Hence the necessity for national censuses of libraries, documentation centres, etc. on the lines already recommended by Unesco.

In general, it may be said that remarkably little has been done in a concrete way towards developing manpower policies for documentalists and librarians. Unfortunately, almost all publication seems to be "forthcoming". A revision is on hand in Nigeria, investigations are in progress in Australia, New Zealand, France, Ireland, Latin America (22), etc. A census using computer facilities which can be used as a model for prediction will shortly be appearing in the United Kingdom, and a report is soon expected from the United States of a study undertaken by the United States Department of Labor, Bureau of Labor Statistics, dealing with projections of library manpower requirements and supply to 1985.

In this field, emphasis must be laid on the need for accuracy in acquiring the facts. One problem is that frequently posts designed for qualified staff are filled by unqualified staff. In some countries, the importance of an efficient documentation, library and archives infrastructure is not appreciated and the best use is not made of the available trained manpower. While adequately trained documentalists and librarians are produced from the schools, in some countries inadequate payment tempts them to leave the profession after a short period and take up more lucrative employment. Where the conditions of service and the status of documentalists and librarians are inadequate, far too often other professionals (e.g. scientists or technologists) who can command higher salaries, but without the necessary professional training and experience, tend to move in.

The balance between recruitment and training is, therefore, a complicated equation. In the first place, there needs to be a clear understanding of the position of the professional documentalist and librarian, and a proper relationship between the standing of these (together with the archivists) and the other professions with a similar educational requirement for professional standing. This involves both the initial qualification for entering upon a course of professional education, and the standard of their terminal qualification. It also involves the clear distinction between professional staff and para-professional staff. It is important that there should be administrative machinery for overseeing professional standards of recruitment, education training and practice (where appropriate by legislation) either by a professional association or by a suitable government or similar official agency. This depends not only on a clear definition of what a professional librarian, documentalist or archivist is, but also on proper rewards for appropriate work and responsibility on a level with other professions. It is recommended that appropriate status should be accorded to professional personnel in the field of archives, documentation and libraries fitting for the level of education and in line with other professions of equivalent standing, e.g. research scientists or university teachers. It is only by a proper monitoring of entry to the profession (itself clearly defined) with monitoring of positions held and the calculation of wastage together with the proper use of qualified manpower that the most effective use can be made of documentation, library and archives infrastructures for any nation in this scientific and technological age.

3. Structuring the profession

The profession of information scientist or documentalist is one for which education and training is now available in a number of countries, and an international conference on the subject was held in Rome under the auspices of the Instituto Nazionale dell'Informazione and FID in 1971. The Hon. Signor Mario Zagari, Minister of Trade and Chairman of the Italian Institute stated:

> ... we are witnessing the appearance of the information technician (i.e. technologist) alongside the classical documentalist. He who yesterday was prepared to organize libraries, archives and certain editorial activities today needs the helping hand of a technologist. If yesterday experience in book classification, abstracting and the codification of information was sufficient, today this is no longer so; now it is essential to know how to use electronic techniques, to understand programming systems and data storage, to be familiar with data files, with the plethora of input and output terminals. Hence the new information expert is forced to live alongside the communications engineer, the linguistic expert, the logician, the audio-visual technician and the programmer. From such an encounter it is obvious that there will develop a new type of information professional, a specialist, who will be all the more necessary the more the patrimony of human knowledge increases (Proceedings 23-24).

Both research scientists and industry have long been conscious of how important good information services can be in supporting their activities. Far-sighted scientists recognized the possibilities of organizing information for their colleagues and the future of an exciting function and career. At first, as in many other spheres, practitioners were unqualified formally in information science except by experience, and this is still the situation in many countries. Where the importance of organizing information services has been widely appreciated - in the United States, the United Kingdom and the USSR, for instance - corresponding educational and training programmes have been formulated and implemented.

Librarians too, who could once be qualified by experience after an appropriate academic qualification (like the information scientists or documentalists) now require not only a first-rate academic preparation but also a professional education which will fit them not only for the tasks of tomorrow, but also for the demands of their career when they reach positions of authority in fifteen or twenty years time. The demands made upon information scientists and librarians now require the possibilities of training which will cater for a number of specialities - the information scientist who is concerned with the development of information systems; or with a highly specialized subject field; the librarian who is in the administration, or who is responsible for systems organization; or has expertise in the field of rare books and bibliography. There is still need for more detailed job-analysis in the field of information science and librarianship, but the structures which are here proposed have a general acceptance, and can be interpreted in a number of different structures, based on national requirements.

In both fields, a similar structure is proposed, based for librarians on the model published by the American Library Association, and for information scientists on the structure outlined in the report by H. Schur for the OECD. At the first level, there are the library assistants or technical assistants who are non-graduates often holders of diplomas from middle level institutions who have also had extensive practical training and are usually responsible for the supervision of the lower grades of staff. An assistant in charge of the issue or circulation desk will often be in this grade for instance, as might be the "chief clerk" in an acquisitions department. The basic grade of professional staff is, in the documentation centre, the graduate information specialist and, in the library, the graduate professional librarian. Further advancement to the most important posts may require an academic degree in another subject together with a post-graduate qualification (e.g. master's degree in the United States and in many countries, a post-graduate diploma in the United Kingdom and the British Commonwealth or Brazil, or an equivalent post-graduate qualification on the continent of Europe). In the documentation field, these will be managers of information services or specialists in information systems, in the libraries, these will be specialists (subject specialists in charge of major collections, systems librarians, rarebooks librarians, etc.) and library managers.

In general, it can be expected that the professional will vary between 25% and 40% of the whole staff, depending on the size of the establishment: the bigger the institution, the lower the proportion of professional staff, though in documentation centres the ratio of professional to para-professional staff is much more variable, depending on the nature of the specialization and the organization of the work. With proper job analysis, however, it could be expected that a reasonable balance would lie between 25% and 33%. With the wide variations in conditions throughout the world, it is impossible to offer anything concrete in the way of costings, nor is it possible to offer costings for automated systems in relation to staffing, beyond saying that computerization on the whole does not save staff: it however makes work more effective because computerized systems are able to furnish much information which otherwise would be prohibitively costly.

4. Education and training

Levels of education and training follow the general structure of the profession. In countries with a long tradition of library service and well-established documentation services, most training of the lower levels of staff will be in-service training based on the practices of the documentation centre or library. New entrants are likely to have the appropriate national standard of secondary education at age 17 or 18, and may also have some clerical training. The basic routines of library or documentation centres, together with an induction course in the general structure and organization of the library or centre, together with its relationship to its parent body needs to be undertaken early in the candidate's career and will be fitted into his or her overall programme. Where libraries, and, even more so, documentation centres are new institutions in a country, there may well be a need to provide formal training programmes for workers at this level. In developing countries, this may be an important and significant activity, where there is no long tradition of library techniques.

It is important at this stage to distinguish between education and training. Education is normally associated with a full-time institution with an academic slant where the theoretical aspects of the subjects are dominant. Training in contrast is directly vocational and students are under closer supervision, often in a working institution. Training for professionals as practiced in some countries can be one of three kinds. First, there is basic initial training completed before the candidate enters the school of library or information science. Following the recent survey undertaken by the Fédération Internationale de Documentation (FID) for Unesco, it seems that most educators are agreed that there is a certain value in a year's pre-education training. This enables the future students to come to terms with the nature of the work involved, decide whether they are suited to the work (and whether the institution considers they are suited to the work too); it also enables them to arrive at some idea of their own strengths and weaknesses in the field and to understand the work which their subordinates will do when they themselves will have qualified. Secondly, there is training undertaken during the actual educational experience. To be of any significance, this needs to be done in periods of a minimum of one month and preferably of six weeks. Lastly, in some countries there is the period after qualification, when the student, now a librarian or information specialist is still under surveillance of a senior professional: there should normally be a period of about a year, when the new entrant, though qualified, still needs some professional orientation. Indeed, some professional associations do not admit practitioners into full membership until they have served a period of this kind.

As we have observed, there is still discussion on the nature of library studies and information science. Nevertheless, there is some agreement that one can teach satisfactorily courses of library studies (or library science) and information

science as theoretical studies with a practical application. Any professional course of this kind must also go some way to giving a liberal education, and introducing its students to new ideas of tradition, logic, mathematical organization, management through the teaching of the organization of knowledge, bibliographical and information studies, automatic data-processing and management of documentation centres and libraries. In addition, post-graduate courses may include a short dissertation which gives some evidence of research experience.

This is also not unconnected with the question of general knowledge and general education for information scientists and librarians. In many fields, a subject knowledge of a field is as important as professional knowledge for the investigation of information. This is as true for documentation centres as it is for work in major libraries. It is for this reason that it is recommended that when practical, for the basic career grade for either information specialists or librarian, a good academic preparation (e.g. a master's degree in the United States, a licence or a maîtrise in France or in Canada, a degree of candidatus in Eastern Europe or Scandinavia, a good honours degree in the United Kingdom) with a professional post-graduate qualification be required. Where there is a degree of bachelor or a licence in library studies or in information science, this should include a substantial portion of another subject, and should be regarded as the absolute minimum for professional status in the long term.

5. A Core Curriculum in Library/Information Science

Most information science, librarianship and archives educators are now agreed that there exists a core curriculum for each of these specialities. What the core curriculum consists of in detail and how far one can reach the ideal of a core curriculum for all three is a matter for discussion still. The following is proposed as a schema that would appear to be acceptable to many educators in these fields today. In a light-hearted fashion, it might be described as the five M's of basic information education - masonry (or foundations), materials, methods, management and mechanization. This includes a general background study for each of the branches and the relation of each to the society in which each is concerned, the various documentary formats e.g. books, periodicals, manuscripts, data, the new media. "Methods" is concerned with the manipulation of the materials - retrieval systems, documentary languages, data organization, bibliographical methods, etc., while management is, of course, concerned with management and organization, personnel, systems planning, etc. Computer and reprographical technology are common to all three branches of information work. (See diagram)

This programme is proposed as the basis of a core curriculum for professional courses. It will be seen that there are a number of overlapping subjects: research methods, some aspect of the history of culture and civilization, the study of different formats, management and mechanization are all common to all three branches. It is also important to appreciate the interdisciplinary nature of this type of programme, and the contribution that could be made by other subjects, e.g. education, psychology, logic, sociology, etc. Indeed, almost any subject contributes to the background knowledge of librarians and information specialists and the possession of an appropriate academic degree makes a real contribution to the effectiveness of their work.

With regard to general educating, one disservice that the rules for accreditation of the American Library Association may have done for American librarianship is that it may have emphasized too much the general liberal education given by a relatively unspecialized bachelor's degree at the expense of specialization. There can be a danger that too heavy a professional programme can be built on inadequate general educational foundations. On the other hand, the value of practical work in the core curriculum cannot be neglected either. The theoretical content of a

A CORE CURRICULUM IN DOCUMENTATION, LIBRARY AND ARCHIVES STUDIES

Courses	Information Science	Library Studies	Archives Studies
Foundations (Masonry)	Sociology of information History of science Scientific communication Theory of communication Research methods	Library in society Library legislation History of libraries and library education User research Research methods	Economic) Legal) history Social) Genealogy, heraldry Research methods
Materials	Various formats - reports, documents, data (ideas) Information services	Various formats - books, serials, new media Reference sources Bibliographical tools History of book arts	Various formats - manuscripts, maps, letters Registers, inventories, etc. Bibliographical tools
Methods	Indexing, contents analysis Documentary languages Storage and retrieval systems Data organization Information dissemination Systems analysis	Indexing, contents analysis Reader services Organization of knowledge Reference processes Systems analysis Preservation and restoration	Registry systems Palaeography Museum techniques Records management Library techniques Preservation and restoration
Management	Management and administration Personnel Systems organization and planning Legal aspects	Management and administration Personnel Systems organization and planning Type of library operation Legal aspects	Management and administration Personnel Systems organization Type of archives operation Legal aspects
Mechanization	Computer and reprographic technology	Computer and reprographic technology	Computer and reprographic technology

developed programme must be balanced by a practical programme especially in countries where there is not a firm library infrastructure and where students have not been brought up to habitual use of libraries. It is also important to bear in mind that while a core curriculum needs to be taught, there must also be opportunities for the students to develop and make some contribution within its scope. There is always the tendency to consider that there is so much to be taught that there is no time to allow for seminar work and a contribution by the students themselves: this is particularly true of a post-graduate (or graduate) course. In Northern America, particularly in Canada, two year master's degrees now exist: this pattern has been followed by the University of Indonesia, where a programme of courses is given one year and the second year is devoted to a thesis. Usually, courses at bachelor's degree level do not offer as high a standard of attainment, since the subsidiary subjects taken in addition to the library science courses are not as advanced as a full degree taken in the same subject. In addition to the core programme outlined above, specialized courses need to be offered; these will depend on the needs of the country, the ambiance of the school, the interests of the students, and the teaching and research interests and capabilities of the teaching staff. In summary, it is recommended that the core programme suggested above should serve as a guide for formulating a basic professional curriculum at a level consistent with that of other university programmes of graduate standing. In view also of the important connexion of subject studies (other than librarianship or information science) with professional education in these fields, it is also recommended that courses of professional education in information science, library studies (and archive studies) should be situated in universities or in equivalent institutions of higher learning.

With the common element so marked in all three core curricula there is a strong argument in a developing country, or one where these professions are little developed, for providing training in the same institution so as to strengthen the impact of all three. In developing countries, for instance, there may be too few posts for archivists to justify a school, and the school at Dakar, does, in fact, act as a regional school for French-speaking West Africa. Hence the wisdom of providing one institution for the education of librarians, documentalists and archivists. While, in general, the education and training of archivists is undertaken separately in Europe, archive training exists together with that for librarians and documentalists in the United Kingdom at the School of Archive, Library and Information Studies at University College, London and at the Department of Library and Information Studies at the Loughborough University of Technology. At the Ecole des Chartes in Paris, archivists and librarians are trained together, as they are at the Spanish Escuela de Documentalists, Archiveros y Bibliotecarios (with documentalists as well).

It has, therefore, to be borne in mind that, while the broad content of a core curriculum will remain the same variations concerning level and length of studies for acquiring professional qualifications exist and these differences will affect the planning of the remainder of the syllabus.

5.1 Specialist subjects

In addition to the core curriculum, it is usually the practice to offer students in librarianship the opportunity of specializing in other subjects which may be of particular interest to them, and which may be the basis for later specialization. Typical examples are:

rare books and manuscripts
music librarianship
study of reading
children's literature and school libraries
medical or agricultural librarianship
international and comparative librarianship

Ideas on a basic programme for information science or documentation are not as firm as those for library science. This is not least because information science as a discipline is still much less clearly defined, and because the various parts of the subject as well as its conception as a whole are still in a process of evolution. Programmes, therefore, range from those with a strong resemblance to library science courses to those which have a close affinity with electrical engineering courses with a considerable variety between.

In a communication to the Rome Conference on the Training of Information Scientists, Mr. A.I. Mikhailov, gave details of courses at the Moscow State Institute of Culture, where information courses were started in 1967 and a chair of scientific information was established in 1969. The programme includes the following courses: subjects and method of scientific-technical information; documentary sources of science information; analytico-synthetic processing of documents; typology of information retrieval languages; classification-type information retrieval languages; descriptor-type information retrieval languages; special-type information retrieval languages; information retrieval systems: general concepts; simpler mechanized IR systems using manually punched cards; mechanized information retrieval systems; automated information retrieval systems; organization of scientific technical information in the USSR and abroad.

At the Instituto Brasileiro do Bibliografia e Documentaçao in Rio de Janeiro, the core of the syllabus is as follows: information retrieval systems; systems of classification; automation in library processes; indexing and abstracting; organization of specialized information centres and services. In addition three subjects have to be chosen from: automatic language processing; theory of communication; research methodology; epistemology; didactics; programming; mathematics. The latter course also includes a management component and a wide selection of optional subjects. Certain computer oriented programmes, however, bear little relation to those cited so far. At the Ohio State University, for instance, the Department of Computer and Information Science in the College of Engineering offers the following, and since the list is so long, it is possible to give only a selection of the titles: engineering psychology; digital computer programming; man-machine interface; introduction analysis; basic concepts of self-organizing systems; theory of automata; basic concepts in artificial intelligence, etc. And many other programmes show an equal diversity of courses depending on their orientation.

In countries where there is only a rudimentary infrastructure for documentation, library and archives services, developments of this kind may at the present seem far ahead. Nevertheless, many countries have computers, and the opportunity will be sought to use them for information services. When there is a rudimentary structure at least of library and archive services, it is recommended that countries should establish local agencies for the education of professional personnel as the means of supplying adequate numbers of archivists, librarians and information scientists or documentalists. Such agencies should have adequate teaching and support personnel.

The satisfactory performance of whatever agency provides the education depends on a clear delineation of objectives, and a single basic programme of post-graduate (or equivalent) standing allows for the most purposive direction of effort. However, a number of schools in fact prepare students for different levels, and this is satisfactory provided that the objectives of each kind of course are clear. In developing countries, library schools in particular have to perform a number of different functions, which may include post-graduate courses, bachelor's courses, two-year diploma courses and one year certificate courses. There is an inherent danger in this spread of effort that the levels of expectation from the students will be confused, and too little, for instance, may be expected from the post-graduate students, too much from the certificate students, simply because there are

not a sufficient number of staff to conduct an adequate number of separate classes directed to the needs of the various levels. Lower level courses for library assistants and technical assistants are better given in middle-level institutions where the content and organization of the teaching is better suited to candidates undertaking studies for work at this level. These courses should be practically oriented, with limited syllabuses including elementary cataloguing and classification, information retrieval, and reference work, together with some introduction to the recent history and operation of documentation centres and libraries in the countries. It is recommended that there should be suitable courses for library assistants and technical assistants, which may be given in schools of university status where this is necessary, but these should normally be organized in middle-level educational institutions.

It must be understood from the introduction to this paper, that the commitment to the development of information services in the fields of documentation, libraries and archives is a permanent one, of which the complexities are increasing each day, and without which it would be impossible to carry on the scientific and technological society of the twentieth century. There must equally be a permanent commitment to professional education and training in these fields. It is therefore recommended that, in the light of the continuous development, expansion and overall importance of documentary information, professional education programmes should be seen as an on-going national commitment.

6. Continuing professional education

It is now commonly accepted in many countries that education does not finish with the end of secondary school or its equivalent, or with the acquiring of a university degree. All sciences and technologies are changing so rapidly that knowledge has to be updated, new fields have to be mastered and among those with a certain kind and level of experience, it is profitable to exchange views on practice and problems. In addition, there is the conception that anyone should be able to progress as far up the educational ladder as he (or she) is able. This gives an added dimension to the concept of continuing education and in the first place entails planning for an easy transition from one level to another. It should, therefore, be made possible for those who have a basic secondary education to take courses for the library assistant or technical assistant qualification on a part-time basis while in full-time work. It should then be possible for the holder to progress to the next stage, and so on to the level of a post-graduate qualification or a research qualification. This kind of possible progression has often been a feature of librarianship. Under the apprenticeship system of recruitment this was regularly practised, and a number of well known librarians reached the highest positions in this way. It seems important that this facility should be retained so that best use can be made of the talent available to the profession. Any unnecessary obstacles which lie in the path of those who wish to qualify for a higher level of certificate or diploma should be removed, provided that the quality of the education is not impaired. It is recommended that the opportunity of transferring from one level of work to another by acquiring a superior qualification should be made available to all those capable of benefitting therefrom.

6.1 Forms of continuous education

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Continuous education can mean a number of things. First, it may mean the possibility of transfer from one level to the next through formal full-time or part-time courses. Secondly it may mean attendance at short courses, which may have a variety of objectives, and professional conferences (the significance of which should not be underrated). Courses may be updating courses, refresher courses, exchange of experience courses, or post-experience courses. Updating courses are courses which

are intended for qualified personnel who need to keep in touch with the latest developments in their field of interest: courses in recent methods of information retrieval, the developments in computerized cataloguing or recent management concepts as applied to public libraries might be examples of this genre. Courses of this kind tend to be of anything from a few days to a fortnight or even a month in duration. They are intended for those already qualified in the particular field in question. Refresher courses are usually of a more general character and are not necessarily devoted exclusively to one topic. These are also directed to the needs of those already in posts who need to know of the broad developments in, say, information science, or documentation, libraries or archives. Many conferences too are of this nature, and give the opportunity of hearing the broad sweep of exposition of a subject by an authority in a field, but with the exposition directed at librarians, information officers or archivists (or all three) at large, rather than at a relatively specialized audience. Exchange of experience courses are intended for specialists in one field of activity so that they can compare and contrast their problems and difficulties, and may be offer solutions to each other. Meetings or conferences of, for example, acquisitions librarians, rare books librarians, information scientists in a particular subject can be of this nature. Many of these courses should be organized by agencies for the education of documentalists and librarians in co-operation with members of the profession and with documentation centres and libraries, who can both lend financial support and additional expertise. It is recommended that teaching programmes should include not only initial courses and advanced studies (see below) but also specialized courses for updating practising professionals, advanced post-experience courses (e.g. in management studies) and exchange of experience courses.

6.2 Advanced specialist courses

Courses of this kind may last from one week to a year. For documentalists, short courses are frequently organized in advanced mechanized informational retrieval systems, for instance, or in specialist subjects. Miss Stella Keenan in 1971, drew attention to the activity of the United States National Federation of Science Abstracting and Indexing Services in providing "Seminars for the Seventies" (23): among the courses provided was the Computer Based Services Seminar. This is intended "for people who have to make value judgements on acquiring machine readable services for their organizations... the problems of selection, utilization and especially integration of these services into individual systems and libraries are not simple or easily resolved". The courses are, therefore, at a high level, intended for people who are already experienced in information science and who have managerial responsibilities in decision making. Other advanced courses are considered by Professor J. Periam Danton in Between M.Sc. and Ph.D., which is concerned with the specialist courses offered by American library schools.

In general, year-long courses of this level are not widely offered in information science and library schools, though there is a growing body of advanced students, with a professional qualification and experience who are engaged on writing theses for master's or doctoral degrees in a number of universities or institutions of similar standing. Not all of these are to be found in information science or library schools, though these are making a considerable contribution to the literature. Among the advanced courses of particular interest in the field of library education, are the courses organized by the Danish Royal Library School for teachers of librarianship. A one year's course beginning in October 1974, for the degree of master in Archive/Library/Information Studies and Education at the Loughborough University of Technology is intended particularly for teachers of information science, librarianship and archive studies in developing countries. This course consists half of subjects in education and half in information science, librarianship or archives, with, in addition, participation in the work of the department, including

teaching practice. It is recommended that advanced level professional education for future leaders of the profession should be undertaken where possible; these programmes can be usefully supplemented by programmes followed in other countries, and teachers from other countries should be invited from time to time to give specialist courses.

6.3 International courses, conferences and seminars

Mechanized information retrieval systems are expensive, and every effort needs to be made to cut back costs in order to make them feasible in terms of cost for information centres and for libraries. National co-operation is essential, but international activity has been growing and continues to grow at the present time. "Universal Bibliographical Control" is one sphere of activity where international co-operation is at a relatively advanced stage. In addition to national seminars, courses and conferences, international meetings have a real rôle to play in drawing on world-wide experience, and Unesco has been instrumental in making many of these meetings possible. For those in developing countries, it is important in terms of the future economic development of information retrieval systems, documentation centres, libraries and archive depositories that the leaders in these fields, and in particular the teachers in these subjects should have the opportunity of attending international seminars, courses and conferences appropriate to their field of activity, and the governments should make the necessary funds available. In terms of future investment, the sum will be small.

In addition to the opportunities given by international meetings, exchanges on an international basis are also important for those who wish to achieve a broader experience and therefore contribute more broadly to their country's development. Germany, the United Kingdom and the United States have all made a contribution in this field, as have the socialist countries of Eastern Europe. For workers in developing countries exchanges of this kind may have particular importance, enabling them to see systems in other countries which show a state of development which will be found in their own countries within a short period. It is therefore recommended that exchanges among students and teachers as well as practitioners be made possible by government agencies and that attention should be given by non-governmental organizations to the problems involved so as to make appropriate recommendations to national professional associations.

7. The Location of Schools of Information Science/Library Study/Archives

Reference has earlier been made to this problem, but it merits closer consideration. There appear basically to be four possibilities:

schools should be in universities

schools should be in institutes of higher education

schools should be in specialized institutes (e.g. institutes of culture) or dependent on research institutes

schools should be autonomous.

Autonomous schools are found in Denmark, France, Germany and Wales among other countries. These are all flourishing institutions and obviously offer a satisfactory solution. In several European countries, library schools are attached to libraries (in the Federal Republic of Germany and Austria, for instance) as is the library school in New Zealand. Education for information scientists is frequently attached to national research organizations, and tends to be less formalized than education for librarianship. In Australia, most library schools which also cater to some degree for information science are based in institutions or colleges of advanced

education. There is, in addition; a school at the University of New South Wales and one to be established at Monash University. In England, the majority of schools are to be found in polytechnics, where students are prepared both for the two year course of the Library Association and for a three year degree course in library science. There are also post-graduate courses. One of the schools (at Leeds) also provides a degree in information science.

In developing countries, the tendency has been to establish schools in universities. While the school in Ghana started as an attachment of the national Library Service it now forms part of the university. Where there is no existing tradition of attaching (or not attaching) schools to libraries, research institutes or other institutions, it is strongly recommended that agencies for the education of professional staff in documentation, library and archive services be placed in universities or in equivalent institutions of higher learning.

There are a number of reasons for this recommendation. First, information science, library and archive studies are essentially interdisciplinary subjects and have close connexions with many other fields. Secondly, the university tradition helps to form what are relatively new disciplines and brings them into the mainstream of learning, with well-established patterns of teaching and research. Thirdly, it helps schools or departments to develop the prestige necessary to attract good teaching and research staff, whose professional outlook is itself broadened by the contact with other university teachers. Fourthly, it helps such agencies to attract research grants, and thus make a real contribution to the professional activity in the country. Fifthly, university education attracts good students who themselves in turn will develop the necessary infrastructures. There are differing points of view as to whether agencies of this kind should be relatively independent in the university (e.g. as an independent institute) or whether they should be a school or department within a faculty. A final decision has to be made in the light of local circumstances. The advantage of a separate institute is said to be that it can develop untrammelled by the conflicting needs and attitudes of other departments with which it must compete, and which may try to stultify its growth; and that it has direct (or more direct) access to the governing body of the parent institution. The advantage of a position within a faculty or school is that it has its proposals scrutinized by a body of interested academics, a process which may refine its proposals and make them more acceptable to the overall governing body; its proposals are then supported by a wider body of academic opinion. There is a danger that an independent school can become introverted in outlook and be insufficiently attuned to the niceties of university feeling and policy.

8. Teachers of science and librarianship

8.1 Recruitment

The ideal in this field is difficult to find. What is required is an able professional with good experience, preferably in a managerial position, with a good subject background, a leader or at least a potential leader in the profession, who has research interests and potentialities as well as past achievement, and who can also teach well at different levels. What is practical is a compromise, in which potential achievement may be as important as past achievement. In developing countries, it is important to look for quality of contribution to professional activity rather than the conventional academic labels. Experience in founding a brand new service in difficult conditions in the country coupled with an imaginative concept of its future development may be much more important than the completion of a master's degree or a Ph.D. in some academically respectable subject which is not germane to the elaboration and betterment of the nation's library services. Different criteria of judgement in appointments to a professional unit of this kind

may be necessary, especially in the early years of library development, from those in the traditional academic subjects, and university or other appointing committees will need to be clear about their objectives and have the courage of their convictions in making such appointments. The minimum qualification should be a degree with a library or information science qualification (or very good experience in lieu) with at least three years' practical or research experience, though even this may not be possible in countries with absolutely minimum services. While this applies to full-time staff, these requirements can be relaxed for part-time staff provided they have the necessary qualities for good teaching and have played a significant part in establishing or developing the country's services.

8.2 Full-time and part-time staff

A corps of full-time staff is necessary to give cohesion and the necessary intellectual power to any university or similar department. The importance of continuity for the students, both in the nature of the instruction and for tutorial assistance, is that the student knows there is a permanent corps of people to whom he can turn for advice. Full-time teachers are able to develop methods of teaching, give adequate time to preparation and care to the marking of essays and exercises which is much more difficult to achieve by part-time teachers, who are also practitioners, with demanding jobs of their own. The development of a research programme too requires a body of full-time staff, who have the time to conceive, plan, and carry a research programme into effect. As information science and library studies (and archive studies) become more scientific in character, so the contribution of the practitioner becomes relatively less important. This is not to say that this contribution is not important. The practitioner brings to the classroom the fresh quality of current experience and the present solutions of problems which the full-time teacher cannot match, so that the permanent staff should be aided by a group of practitioners who can enhance the programme with their own special contribution. There should be as a minimum four full-time members of the teaching staff, together with a group of part-time teachers. The British standard of one full-time member of staff to ten students has been mentioned: there should certainly not be less than a ratio of 1:20 or more than 1:6, always provided there is a minimum of four.

8.3 Interchange of practitioner and teacher

Opportunities should be available when this is practicable for interchange between practitioner and teacher. Teachers after a number of years become divorced from the actualities of the infrastructure and need to renew their acquaintance with practical information work or librarianship. It is recommended that there should be appropriate machinery for effecting this, or at least opportunities for teachers to act as consultants in the solution of practical problems of documentation, library or archive services. It should be added that exchanges of this kind also give practitioners the opportunity to consider problems in a broader context, relieved of the treadwheel of daily routine, to read more widely in the professional literature and to have contact with fresh young minds unhindered by the practical considerations of diplomacy, financial constraint, and traditional practice.

9. Conclusion

The importance of documentary information work in modern technological society cannot be gainsaid. Information provides the key to much of the scientific and technological development which continues minute by minute, day by day. For success in this venture, world-wide in character, the best possible personnel are required who will match up with their fellow workers in contiguous fields. It is for this reason that attention is again drawn to the importance of according proper status for workers in this activity, comparable with workers in related fields with similar

advanced preparation. Personnel is the key to modern information handling. It is professionals of vision who will see the importance of conserving effort, of achieving standardization so as to maximize the benefits of modern information technology. As already recommended it is important that governments should be concerned with these questions in the interest of the economic development and prosperity of their country.

The contribution of the non-governmental organizations must also be stressed. There is immediate need for adequate information about agencies for training and educating professionals in this field, and an investigation is already in hand by FID under a contract from Unesco. There is equally a need for investigation of equivalencies of qualification so that workers who transfer to another country, or who seek short term exchanges can be assured that their qualifications will be accepted at their proper worth: this is an important human consideration. There is also a need for an investigation into what constitutes a core programme both in library studies (where there is a tendency towards a consensus) and in information science (where a consensus of opinion is less evident). There is need of an organized programme of exchanges both among students and among teachers, so that understanding of information work and the education for it can be widely and deeply comprehended by those who will possibly make a vital contribution to the growth of their country's services and the enrichment of its life.

Information work exists to make the transfer of knowledge more effective. Knowledge makes understanding easier. Understanding contributes to the peace of the world. Every worker in the field of information library archive work makes a contribution in this sense and this is what makes the activity worthwhile.

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GENERAL INFORMATION PROGRAMME

MEETING OF EXPERTS
ON THE HARMONIZATION OF ARCHIVAL TRAINING PROGRAMMES
Unesco House, Paris, 26 - 30 November, 1979

PLANNING INFORMATION MANPOWER

by

P. HAVARD-WILLIAMS and E.G. FRANZ

(PGI-79/CONF.604/COL.3)

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II. ARCHIVES

Manpower planning, training facilities and the preparation of curricula for regional training centres

by

E.G. Franz

PREFACE

The studies on "The Rôle of Archives in Public Administration", which were executed for Unesco and the International Council on Archives in 1970-1972 by M. Jean-Jacques Valette and Dr. F.R.J. Verhoeven, and the paper title that Mr. M.B. Delmas prepared earlier this year on the "Creation and Development of National Archives Services", have outlined the general frame of archival functions and archival development. These studies, as well as various reports of archival expert missions to developing countries published in the course of the last ten years, and the discussions of the VIIth International Congress on Archives in Moscow 1972, have stressed the primary importance of trained personnel and of adequate archival training facilities for any form of archival development. The first objective of this paper is to specify the various categories of personnel, which are needed for the proper functioning of modern archives services, and to give some indication of the rather complex problems of personnel structure and manpower planning. A survey of the existing forms of archival training in the second part is followed by a discussion of training institutions and training programmes for the special needs of developing countries, including the training centres, which have been started or projected in Dakar and Accra. Particularly in the field of personnel planning exact parameters are largely lacking, even in the so-called developed countries, so that any recommendations have to remain tentative. An attempt will be made to give the ideal scope for a fully developed archives and records service, while defining minimum requirements for beginning new archives projects. The planning of training institutions should combine the fulfilment of the immediate needs of organizing archives services with provisions for later expansion in accordance with the personnel demands of a full-grown system of archives and records administration.

1. Archives personnel

1.1 Introductory remarks

Half a century ago, trained personnel in the archives was limited to the archivists themselves. These archivists were normally university graduates with a degree in historical or legal studies, with or without additional archival training, which in quite a few countries was given "on the job". Within his archives repository the archivist was responsible for almost everything. This included the whole range of archival tasks, as they were seen at the time, from the evaluation and acquisition of records, arrangement and preparation of finding aids for answering inquiries, advice to searchers and scientific exploitation, as well as the administrative problems of the archival agency. The staff of a regional or local archives office would be limited to one or two archivists, perhaps a clerical officer (later on a secretary-typist), one or two attendants, who might take care of some primitive repair work too, and a charwoman, a picture which in similar forms was true for other branches of public administration as well.

With the scope of administrative functions in general, the work in the public archives has undergone considerable changes, both in quantity and in quality. The rapid inflow of growing masses of modern records, which have called for new methods of appraisal and archival treatment, was combined with an extension of archival responsibilities to the fields of current records management, documentation and public relations, while the material conditions of modern records called for new developments in the technical fields of conservation, document repair and reproduction. Nevertheless, archives have come to realize much later than many other administrative departments the necessary impact of these new developments as far as manpower is concerned, that is, upon the structure and training of archives personnel. Up to now, archivists with strong academic qualifications are, in many cases, charged with technical and administrative work, which is far below or outside their professional capacity, a practice which is not only uneconomical but at the same time detrimental to the social and administrative status of the archivist.

Though the fact that the wide variety of archival, administrative and technical functions in the field of modern archives and record services calls for a similar variety of trained and untrained personnel may be said to be generally accepted by now, it is only lately that exact functional descriptions and training facilities for the non-scientific categories of archives personnel have been developed. The personnel structure in the archives of most of the older countries with a long archival tradition seems still influenced by his tradition as far as the numerical relations between professional, sub-professional and technical personnel are concerned. This is to say, that the actual figures on personnel expenditure in European archives administrations, which were compiled by Dr. Jørgensen for his excellent report to the Luxemburg session of the Table Ronde des Archives in 1973, have to be used with great care when determining standards of personnel planning for new archives services.

1.2 The categories of archives personnel

There are three major groups of personnel needed to operate an archives administration with its various tasks and functions:

(a) for the archival function as such a specialized archival personnel is needed. From the head archivist down to the repository attendants this includes all the personnel engaged in the archival tasks of administering archival (or pre-archival) records;

(b) for the technical function, the tasks in the field of conservation, restoration and photographic reproduction, various types of technical personnel are needed, who have to combine general competence in the respective technical disciplines with additional knowledge about the special conditions of archival material;

(c) for the administrative function, the administrative and financial management of the archives agencies as well as for the secretarial and office work, maintenance and cleaning, driving and messenger services, a certain number of general administrative personnel is needed, who have to comply with general administrative standards without any special training for the archival field.

The numerical shares as well as the functional weight of these three major groups for the whole of the archives service are, of course, quite different. The essential part falls to the archival personnel of the first group, whose leading representatives have to determine the general policy of the archives administration. The importance of the technical services has been steadily increasing, however, and this even more so in tropical countries with their special climatic problems. The administrative personnel, though normally in subordinate positions, should be well chosen too, for it is the efficiency of the administrative staff which assures the proper functioning of the whole archives service. In all three major groups there will be various levels of personnel.

It is understood, that there are numerous variations to the structural scheme, which is proposed hereafter. This is particularly true for the archival personnel. Differences in the qualifications in terms of general education are due to the different educational systems and to the reservoir of qualified candidates, who are available for archival recruitment. Malaysia requires a bachelor's degree (with honours) for the leading group of professional archivists, whereas in India not only the chief officers and archivists, but also the assistant archivists of the second category are supposed to have a master's degree in Indian History. The periods spent on general and professional education for an archivist's position are vastly different. While in Germany the requirement of a doctor's degree plus two years of professional training makes it almost impossible to attain the first career post before the age of 27 (the actual average age is 30!), the French "archiviste paléographe" is first appointed as "conservateur adjoint" or even as director of a smaller archives repository when he is about 23 years old. There may be doubt as to whether persons trained in the courses in archives administration at the universities of London and Liverpool, or in the various courses offered in the United States, belong to the first or second category of this scheme. The limits are equally fluid for the second and third category, where secondary education with two or three years of training in professional training institutions at the level of professional or technical colleges will qualify for the second category of professional (assistant) archivists, while the same general education plus archival in-service training will make for sub-professionals of the third category. The founding of the attempted classification on formal qualifications only does not account for the significance of professional experience. Senior officers with a long professional record may in quite a few countries go up to the next category with or without formal qualifications obtained by additional training.

The differences and unequalities referred to will not allow for a normative qualification of archives personnel which is absolutely binding or equally valid for all countries. The problems noted here should be kept in mind, when the following scheme is used as the basis for further considerations of the personnel structure and for the planning of archival training, which is the main object of this study.

1.2.1 Archival personnel

For the archival function, provision of the following four categories or archival personnel is recommended:

(a) Archivist

Professional (advanced professional)/academic[1], post-graduate level; "catégorie scientifique"; "höherer, wissenschaftlicher Dienst".

(i) Functions

Direction of the archives and records service and of larger units (including the whole of the technical services) within or outside the main archival agency (central or national archives);

responsibility for the general archival policy;

organization of archives and records services in the various government departments;

supervision of intermediate repositories (record centres) and regional archives repositories;

supervision of personnel training within the archives and lecturing in training institutions;

development of evaluation methods and review systems with principal decisions on the value of certain record groups, disposal schedules and record retention plans;

planning of the arrangement and listing work with decisions on priorities and depth of inventorying;

participation in administrative and historical research and reference work, as the special professional capacity of an archivist with scientific standing is required;

in European archives this includes the arrangement and description of older and more difficult modern record groups, which cannot be treated without the skills and the specialized knowledge of the experienced historian.

(ii) Qualifications

General education: Completed university education with an advanced degree. The first qualification should be the master's degree or at least a bachelor's degree "with honours" in English speaking countries, the "licence" or "maîtrise" in countries with a French-influenced educational system. Quite a few European countries require a doctorate in history, law or economics.

Professional education: a thorough archival training at the post-graduate level, which in some countries may be acquired after entering the archives service (in special training institutions or as in-service training), while in other countries it is part of advanced university studies.

(1) The distinction between "academic" and "non-academic" is used in the continental meaning of the terms, where an "academic" is the holder of an advanced university degree (doctorate, maîtrise of licence), equivalent to the post-graduate level in the Anglo-American educational system.

(iii) Examples

England: Assistant Keeper in the Public Record Office (with the higher posts of Keeper, Records Administration Officer, Principal Assistant Keeper); France: Archiviste paléographe, Conservateur (with the higher posts of Directeur général, Inspecteur général, Conservateur-en-chef); Federal Republic of Germany: Archivrat (with the higher posts of Archiv-direktor, Oberarchivrat, etc.); India: Archivist (with the higher posts of Director, Deputy and Assistant Director); Malaysia: Archivist.

(b) Assistant Archivist

Professional (basic professional)/non-academic[1], graduate level; "catégorie d'encadrement"/"Cadre technique supérieur"; "Gehobener/diplomierter Dienst".

(i) Functions

Direction of administrative archives and records services (departmental records officer) in larger government departments, of intermediate repositories and smaller regional and local archives repositories, or of certain archival services (including the technical services, as an alternative to scientific technical personnel at the same level);

assistance in the training of archives and records personnel;

advisory functions in the field of current records management;

organization of records transfer and records appraisal (according to the principles determined in co-operation with the responsible archivist);

arrangement and description of modern records of various types;

dealing with written inquiries and assisting searchers;

administrative and archival documentation.

(ii) Qualifications

General education: Completed secondary education. The normal first qualification should be the successful termination of secondary school or college, i.e. higher school certificate or bachelor's degree, "baccalauréat", "Abitur" or "Fachhochschulreife".

Professional education: archival training in an archival training institution or within a specialized college curriculum, leading to a diploma or certificate in archives administration, at the graduate level.

Experienced senior officers from the following category (archives assistants) should have the chance to move up, if they acquire the additional professional qualifications.

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(1) See footnote on page 35.

(iii) Examples

England: Inspecting Record Officer in the Public Record Office and Senior Executive Officer (as Departmental Record Officer or head of the Record Centre); France: Archiviste-documentaliste and Adjoint d'archives (though without special archives training); Federal Republic of Germany: Geprüfter Archivar, Archivinspektor (with the higher grades of Oberinspektor, Amtmann, Amtsrat); India: Assistant Archivist; Malaysia: Archives Executive Officer; Africa: Archiviste with diploma from the Regional Archives Training Centre at Dakar.

(c) Archives Assistant

Sub-professional/intermediate level; "catégorie d'exécution"/"cadre technique"; "mittlerer Dienst".

(i) Functions

Direction of records services in smaller administrations; co-operative participation in the work of the assistant archivists (team work);

execution of routine tasks in the fields of records management and records appraisal (reviewing of recurrent records according to given rules, etc.);

arrangement and listing of certain types of recurrent records;

indexing and documentation work;

supervision of the repository and search room attendants.

(ii) Qualifications

General education: Completed school education, ordinary (or advanced) level, school certificate, the former French "brevet" or the "mittlere Reife" (10 years of school education).

Professional training: Basic archival training, in some countries in special training courses, mostly as in-service training.

Qualified officers from the clerical staff may have the chance to move up (in Malaysia after 5 years of service).

(iii) Examples

England: Executive and clerical officers; France: Commis; Federal Republic of Germany and German Democratic Republic: Archivassistent; India and Malaysia: Archives Assistant.

(d) Records Attendant

Sub-professional/lower level; "einfacher Dienst"

(i) Functions

Care for record holdings in administrative archives, intermediate repositories and archives repositories;

control of disposal and accession lists and other technical work in connexion with records transfer;

execution of technical tasks in connexion with arrangement and description (packing, numbering, labelling, etc.);

drawing out and replacing of records, which are requested for administrative or research purposes;

supervision and technical assistance in the search room services.

(ii) Qualifications

General education: Basic (lower secondary) education.

Professional education: Introduction into archival practice, in some cases in special training courses.

(iii) Examples

England: Repository Assistant; France: Magasinier, Gardien; Federal Republic of Germany: Magazinmeister, Amtsmeister; Denmark: Arkivbetjente; India: Special Grade Record Attendant.

1.2.2 Technical personnel

Though in most archives all technical personnel belongs to the second category, two main categories may be distinguished:

(a) Technical Expert

Professional level; "cadre technique supérieur".

(i) Functions

Direction of technical services (Photo laboratory , Laboratory for repair and preservation, Section for data processing, as an alternative to its being done by archivists);

research in the fields of document repair, records preservation, archival reprography and application of data processing methods in archives;

supervision and training of technical personnel.

(ii) Qualifications

General and professional education: Completed university studies with a degree in Chemistry (or Physics), for data processing in Mathematics and Information Studies; additional experience in the archival field, acquired by in-service training, practical experience and visits to technical services in other archives.

(iii) Examples

India: Scientific Officer and Assistant Chemists, Microphotographist and Assistant Microphotographists; in some European countries too, particularly in Eastern and South Eastern Europe (USSR, Hungary, Romania, etc.) scientists are employed as heads and as academic collaborators in archival laboratories.

(b) Technician/Repairer/Photographer

Sub-professional/technical level; "cadre technique"

(i) Execution of various forms of document repair work and preservation measures;

book binding;

microphotography and other archival photography;

programming for data processing.

(ii) Qualifications

General and professional education: Sufficient education (school certificate, lower secondary education) and technical training by apprenticeship or in-service in central laboratories.

(iii) Examples

India: Preservation Assistant, Photo Assistant, Laboratory Assistant, Binders (with menders and laboratory attendants on the lower level); in most other countries archives restorers (or repairers), book binders and photographers are posted on the level of archives assistants and attendants without special titles.

1.2.3 Administrative (managerial) personnel

In the context of this study on archival training a detailed enumeration of categories and grades for this group seems unnecessary, since all categories have non-archival training or no professional training at all. The principal categories would be:

Administrative staff: Administrators and Accountants (professional and sub-professional level), clerical officers;

Library staff: (Assistant) Librarians (professional level);

Library Assistants and Library Attendants;

Clerical and secretarial staff: Secretary-typists, Registrar;

Maintenance staff: (Assistant) Engineer (professional or sub-professional level); mechanic, electrician, heating operator, caretaker, cleaning personnel;

drivers, messengers, etc.

1.3 Personnel structure and personnel planning

For the administration in general the personnel structure resembles a pyramid, where the head officer of a department is supported by a relatively small number of professional assistants, which in turn rely on a larger number of (sub-professional) executive officers. The basis of the pyramid is formed by the clerical and technical personnel. Rational administrative planning will tend to delegate as many tasks as possible to the lower levels, thus restricting the leading officers to directing functions only. The base will be broader the more the administration concerned is

charged with routine tasks, a fact which becomes quite evident in considering the personnel structure of post or railway services, where officers of the executive category direct large units of subordinate personnel. In administrative branches with a high degree of professional or technical specialization the picture will be different, so that the qualified professional and sub-professional personnel will be equal or superior in numbers to the technical and clerical staff.

For the archives the idea of a pyramidal personnel structure is a relatively recent one. There is no doubt, that archives are to be counted among the specialized branches of public administration with a relatively high percentage of specially trained personnel on various levels. Nevertheless, for the reasons explained in the introductory remarks, the personnel structure in most European archives may be said to be unbalanced with a definite overweight on the part of the professional (academic) archivists. In Israel or Hungary more than 40% of the State archives staff belong to the category of university trained archivists, while in Denmark and France, Austria and quite a few of the German archives this group would comprise about 20 to 25% of the whole.

The figures given in the last paragraph are taken from the 1973 report of Dr. Jørgensen, which was already mentioned. Unfortunately, the grouping in Dr. Jørgensen's very elaborate statistics for the personnel in the 11 archives administrations which have contributed to his report does not fully correspond with the categories which are suggested in this study. Dr. Jørgensen's group of "university trained staff" will for some countries include the professional archivists of the categories A1 and A2 of this study. His second group "archival staff without university training" will reach from the sub-professional or even assistant archivist level down to clerical staff and records attendants. The administrative personnel is partly counted in the "office staff" group, partly under the heading of "other permanent staff". The table in Appendix I combines the figures, which could be taken from the Jørgensen report, with additional data which were furnished by various administrations (especially France, Great Britain, India, Malaysia and Federal Republic of Germany). The ratio between archivists (academic or post graduate level) and assistant archivists (non-academic, graduate level, category A2) is in most cases about 1:1. The tendency will certainly run towards an increase of the second group, though for some countries the careers and training procedures for the intermediate levels of archival personnel are still being formulated. At the moment there is quite often only one category of non-graduate archivists beside or underneath archivists with a full university education. If these (academic) archivists are thus contrasted with the whole of categories A2 and A3 as proposed in this study, the ratio will in some countries like Austria and most of the Federal Republic of Germany State archives remain at about 1:1. In Hungary it will even mount to 2:1. For the central archives in London, Paris and Koblenz, however, the ratio is about 1:2 to 1:3. The same ratio applies to the national archives services in India (1:2.2) and Malaysia (1:3).

Differences in the quality of archival holdings will not allow for a standard ratio to be fixed. Archives with a large proportion of older historical records are bound to have a relatively high proportion of archivists with a complete university education in history and related disciplines. Even there, however, the continuous inflow of modern records, the establishment of intermediate archives (record centres) and new tasks in the field of records administration and documentation will call for a steady increase in the quota of assistant archivists and archives assistants (categories A2 and A3).

For the new archival administrations in the younger States overseas, where the bulk of the records is of rather recent origin, while even historical records by and large do not go back beyond the 19th century, the core group within the stratification of archival personnel will be that of assistant archivists (category A2).

There may be only one (academic) archivist to about three to five assistant archivists. On the other hand, for the routine work there should be at least one to two archives assistants (category A3) to every archivist and assistant archivist of the higher categories.

Some of the more recent attempts to attain concrete figures for archival manpower demands try to relate the number of archivists to the volume of archival holdings. In the regional state archives of the Federal Republic of Germany the accepted standard is one (academic) archivist to about 2.500 running metres of shelving. The actual figures for the London Public Record Office and for the Danish archives show about four kilometres of shelving to every archivist. In the French provincial archives the ratio is even less favourable. On the other hand in the Koblenz Federal Archives as in Malaysia there is about one archivist to every 1000 metres of records, and in India it is almost two.

The calculation on the basis of running feet or running metres of archival holdings as the sole parameter is certainly much too simple. A kilometre of archives is no fixed unit of measure for archival work. The amount of work to be carried out may be vastly different, depending on the age, on the contents and on the structure of the records. Furthermore there are many additional factors to be considered. In the field of records administration it might be possible to calculate the amount of work on the basis of number and size of administrative departments served by the archives, the annual output of administrative records and the destruction rate. The statistics on consultation by visitors and written inquiries and/or the number of records produced would have to be taken into account as well. Though there are some figures in Dr. Jørgensen's report, a lot of additional research would be necessary to gain a reliable basis for uniform personnel planning standards, which, on the whole, do not exist for the archives in European countries. Leaving aside the actual differences between various countries, there would have to be different standards for historical and modern archives, for central, regional and local archives, and all of these would not help very much for the archival development in overseas countries, where the situation is again quite different.

As has been indicated before, the basic group for the new archival administrations in the developing countries ought to be that of assistant archivists (category A2). Thus, personnel planning in the context of archival development has to start from this group, not from the relatively small number of posts for (academic) archivists. The tentative suggestions of this study would largely go along with the indications contained in the 1973 Delmas report on the planning of national archives services. The minimum staff which is desirable to start a new national archives service would consist of:

1 archivist (category A1) as director

3 assistant archivist (category A2)

3-5 archives assistants (category A3)

4 records attendants and messengers

2 binder-repairers and 2 micro-photographers

1 administrator (executive officer), 2 secretary typists

1 driver and maintenance personnel corresponding to the necessities of the space which is allocated.

For the full-fledged national archives and records service the number of (academic) archivists should be increased to about three to six, depending on the size of the administration. Posts for (academic) archivists would be the Director, the Deputy Director (as head of the historical archives) and the Records Administration Officer (as head of the records administration service with responsibility for

the archivists and record officers in the various departments). An additional section might be formed for documentation services (for governmental purposes), data processing and technical services, where the head-post might be filled by an archivist, by a scientist or by a documentalist. In large countries one (or two) Inspector(s) General should be responsible for regional and local archives.

For the planning on the assistant archivist level (category A2) it is recommended to count one assistant archivist for every 1,000 metres of archival holdings in the central archives. In addition the planning should provide for one archival officer of this category (as Departmental Record Officer and Administrative Archivist) in every one of the big administrative departments (Ministries), i.e.: Secretariat (President's or Prime Minister's Office), Foreign Affairs, Interior, Justice, Defence, Treasury, National Economy, Planning and Lands, Public Works, Education, Health and Labour. Similar posts should be created for the Railroad Corporation, Airways, Radio-Television and other State-owned or semi-public companies (National Development Corporation, Co-operatives Union, etc.). If necessary and possible, several smaller departments and companies could be entrusted to one archivist. If regional archives or intermediate repositories are created, there should be one archivist of category A2 for every repository. Even without regional repositories a certain number of posts for resident archivists in the larger administrative regions should be useful.

There should be two to three archives assistants (category A3) to every assistant archivist and at least one trained records attendant to every four kilometres of shelving and for every regional and intermediate repository.

The size of the workshops and the corresponding number of posts for the technical personnel should depend on the material quality of the records. The Delmas Report provides repairing and book-binding shops with 20 to 30 persons each, though only part of them would have to be trained repairers and book-binders. For the photographic unit three to five persons would be sufficient.

The administrative personnel (a secretary-typist to every two or three archivists and assistant archivists, administrator, accountant, driver, messengers, maintenance personnel) is left aside here, since there are no training problems involved. With the large supply of (unskilled) manpower in the developing countries it will be fairly easy to have a large number of posts in the lower ranks (messengers and office boys, laboratory hands, dusting personnel, guards, etc.). It is certainly only economic to relieve the members of the trained personnel of the manual and routine work, which they are still burdened with in many European archives. It may also be important to maintain the necessary social and administrative "prestige" of the professional personnel.

1.4 The status of archives personnel within the government structure

The creation of training programmes and training facilities which are to be discussed in the following chapters of this study, and the recruitment of trainees with an adequate general education are only first steps in solving the problems of archival personnel. After completion of the professional education the trained archivist (or assistant archivist) will in most cases need additional years of practical experience to render full service. To reach truly positive results in archival work and to secure the necessary degree of continuity within the archives service, it will be necessary to provide the statutory and budgetary conditions for adequate careers within the archival field. It is certainly possible to "bind" trainees, who receive national or international scholarships, with an obligation to serve in the archives for a certain number of years, as is done in some countries. To keep them in the archives for more than the obligatory period, the archives have

to offer an administrative and social status, career possibilities and salary scales, which can compete with other branches of public administration or with the attractions of university teaching.

To insure an adequate administrative standing, archives personnel should be integrated into the system of the general civil service with statutory regulations equal to those for other administrative personnel with similar qualifications. There should be an adequate number of high level posts, which - considering the relatively small numbers of archival personnel - may have to be out of proportion in comparison with other administrative departments. The double function of archives in the administrative and in the academic field calls for an additional adaptation of the career posts in the archival field to the respective categories of academic teaching personnel, though a direct interrelation, as is the practice in Belgium, may not be compatible with general civil service regulations. To avoid a "brain drain" towards the universities, the posts of entry for archivists with advanced academic training (category A1) should be equivalent to those of assistant professors at the university, with the high level posts going up to the level of full professors.

The necessity for adequate grading is equally urgent for the technical personnel. The training of archival photographers or repairers is wasted, if they will have to leave the archives for better paid positions in other administrations, in university institutes or in private business. There too, certain possibilities for careers within the archives should be offered.

Experience with overseas scholarships for archival trainees from developing countries has shown that adequate provisions for the integration of returning trainees should form an essential part of any kind of development measures concerning archives personnel. Observations of the experts, who were employed at the archival training centre at Dakar, seem to point in the same direction.

1.5 Co-ordination of personnel programmes for archives with the overall system of national planning

Personnel planning is, of course, only one aspect within the general planning system. As far as the archives are concerned, the personnel question will have to form a key chapter within the long-term development plans, which should be established for every national archives administration. The planning of personnel development will have to be related to the expected increase of archival holdings, to the corresponding extension of archival premises (building programme), to the organization of departmental records administration and regional archives services, though, on the other hand, the organization of these services will have to be effected in accordance with the possible personnel supply. The national plan for archival development as a whole will have to be incorporated into the general development plan of the country, taking into account the projected volume of public expenditure, of public building programmes and of personnel increase. Furthermore, the programmes for archival personnel recruitment and training will have to be adapted to the development of national education.

The drafting of a national plan for archival development and its integration into the general system of national planning will be the responsibility of the National Archives Council or a corresponding consultative body (Conseil National or Conseil Supérieur des Archives, Commission Permanente des Archives, etc.), which is also responsible for the creation of the necessary statutory provisions. The inclusion of representatives of the Ministry of Education, the Ministry of Finance and of the central establishment and planning agencies into the Archives Council provides for the necessary harmonization with the planning concepts in related fields. Inasmuch as a combination of archival training with the training for libraries and

information services is envisaged, the Archives Council or a special combined commission would have to care for the respective co-ordination on the national and possibly supra-national (regional) scale.

2. Existing forms of professional training for archives personnel

2.1 Introductory remark

In most European countries professional education for the archival profession has been developed in accordance with the traditional concept of the academic historian-archivist. In the curricula of institutes likes the "Ecole des Chartes" in Paris, the Austrian Institute of Historical Research or the Vatican Archives School up to now a large part of the lectures are devoted to the historical auxiliary sciences and other subjects connected with mediaeval and early modern records. It is only step by step that the curricula are being adapted to the changing tasks of present-day archivists by the inclusion of subjects like modern records management, archival techniques, problems of audio-visual records, data processing and informatics, etc. The attempt to sustain the uniformity of archival training as the basis for a uniform corps of professional archivists necessitates the continuation of the traditional elements of the curricula, though a growing number of archivists, even in the older European countries, will have no chance to apply their very thorough knowledge of mediaeval diplomatics, paleography, heraldry, etc. in their professional work, which will be concentrated on contemporary records and their specific problems. The formation of two separate curricula for the "classical" all-round archivist and for a new type of "modern" archivist is being discussed in various countries. A practical model of archival training in two branches has been developed in the diploma courses of archives administration which are being taught at the University of London School of Library, Archive and Information Studies.

Another new development is the training courses for archival personnel in the non-academic categories. The formalized training of sub-professional archivists in the German archives schools at Marburg, Munich and Potsdam goes back to a first course at the Berlin school as early as 1940. Similar courses are being taught in the Dutch Archives School at Utrecht, and most recently, new courses for assistant archivists and records attendants have been reported from the Scandinavian countries. Regular training facilities for archival repairers are being discussed.

It is quite evident, that the traditional forms of European archival training are to a large part not applicable to the conditions of new, developing archives administrations. Nevertheless, experiences and discussions of the subject in different countries may be used to develop the new forms of training, which are necessary to comply with the personnel demands of modern archives and records administration. A survey of existing training institutions is given in Charles Kecskeméti's report on "La formation professionelle des archivistes", which was published by the International Council on Archives with the support of Unesco in 1966.

2.2 Archival training institutions

2.2.1 Training institutions for academic archivists

The tradition of archival training institutions in Europe goes back to the early nineteenth century. For the training of (academic) archivists, which up to now has been the principal object of most considerations on archival training, we have to distinguish two main alternatives. Both of them actually date from the beginning of the schools at Paris and Munich in 1821. In the first version, general

education in history and related subjects and the specific instruction for the archival profession are tied together in one curriculum, which is taught in specialized training institutes within or outside the universities. This type of training necessitates an additional period of internship training for introduction to archival practice. The second solution leaves the general education to the normal course of university studies; the post-university programme of professional education is a combination of archival theory and practice. The two alternatives may be illustrated by the following diagram:

<table>
<tr><th></th><th>1st version</th><th>2nd version</th></tr>
<tr><td>General education</td><td rowspan="2">Archival training institution

university-type</td><td>(University)</td></tr>
<tr><td>Professional (archival) education, theoretical part</td><td rowspan="2">Archival training institution

post-university</td></tr>
<tr><td>Practical archives training</td><td>(Internship training)</td></tr>
</table>

(a) University-type or university-affiliated training institutions

Most of the younger training institutions follow the "Ecole des Chartes" model, that is the first of the two alternative patterns. They provide a training programme of normally 3-5 years, where the study of historical subjects (general and regional history, legal, administrative, economic and social history) is combined with instruction in the auxiliary sciences for mediaeval and modern source materials and with specific professional instruction in archival theory, history and organization of archives, records and archives administration and archival techniques. The instruction is mainly theoretical, though a certain amount of practical training in neighbouring archives repositories or internship work in the archives during the vacation periods may be part of the programme.

It seems to be of minor importance whether archival training institutes of this type are actually incorporated into a university, or whether they are organized as separate institutions outside the university. To a certain extent this will depend on the number of archival trainees needed for the respective country. Archives institutes or Institutes of archival studies within the framework of State universities are working in the German Democratic Republic (Berlin/Potsdam), in Poland (Toruń, Warsaw, etc.), in Czechoslovakia (Prague, Brno, Bratislava), in Hungary, in Great Britain (London, Liverpool, Aberystwyth), in Portugal and in Israel. Separate institutions on the university level are the "Ecole des Chartes" at Paris and the Historic and Archives Institute at Moscow, while the university-affiliated Vienna Institute for Austrian Historical Research takes an intermediate position. The Paris school combines the training of future archivists with the preparation for the service in scientific libraries and museums. The same is true for the Austrian Institute at Vienna, which at the same time provides advanced research training to future university historians. The Moscow Institute is composed of two faculties, the older faculty for historian-archivists and a second one for documentalists and records administrators which was added in 1964. Whereas the Paris and Moscow institutes are endowed with a separate corps of full-time professors, most of the university institutes have only one or two special chairs, while the rest of the programme is taught by the teaching personnel of other university departments.

As has been pointed out before, the lack of practical evidence and practical experience in many of these university-affiliated training programmes may necessitate an additional introduction to archival practice, which is normally given "on the job", after the candidates have been named to their first archival posts. An exception is the French system, where the National Archives have organized an additional introductory course or "Stage Technique d'Archives" of several months, which is obligatory to all future State archivists, who have already acquired the diploma of the "Ecole des Chartes".

(b) Post-university training institutions

With the second model the beginning of specialized training for the archival profession and in many cases also the decision for this profession are postponed to the end of general studies at the university. The candidates, who are admitted for professional training, are post-graduates, in the majority historians, who have already demonstrated their capacity to do independent research on (mostly archival) sources by preparing a doctoral or master's thesis. In some countries basic training in the auxiliary sciences (diplomatics, paleography, etc.) is supposed to be part of a comprehensive historical education at the university, so that the post-graduate professional education may be limited to special subjects like archival theory, archives and records administration, archival techniques, etc. With this rather limited scope of professional subjects, special archival training in some cases has been reduced to a course of introductory lectures within the archives, supplemented by a certain amount of practical experience, as organized in the Belgian archives between 1920 and 1965. In other countries, where the number of annual openings in the archives was too small to support a regular training institution, the specialized training was and is furnished quite informally in the first year of the professional service, a system which is operating up to now in most of the Scandinavian countries and in the British Public Record Office.

The archival training institutions of the second (Munich) type represent the formalization of this introductory period. Contrary to the institutions of the first type, whether they are university institutes or separate institutions in the realm of higher education, the training centres, which practice the second way of archival training, are as a rule part of the national archives organization. Archives schools or institutes of this kind are organized within or in close connexion with a larger archives repository, and most of the lectures are given on a part-time basis by professional archivists. This is true for the archives schools at Marburg and Munich (Federal Republic of Germany), at Utrecht (Netherlands), at Delhi (India), for the Vatican School of Paleography and Diplomatics and for the 14 schools which are connected with various provincial archives in Italy. The Spanish post-graduate School of Documentalists at Madrid (Escuela de Documentalistas, Archiveros y Bibliotecarios), which is run under the auspices of the Director General of Archives and Libraries, provides a duplicate curriculum for archivists and librarians with a certain number of common courses and specialized sections for both professions.

The duration of professional training at these post-graduate institutes lies between six months and two years. In spite of the foregoing university education, most of the curricula are not limited to subjects in the special field of archives and records administration. To intensify and implement the unequal results of different types of university studies they offer additional lectures in the auxiliary sciences and in subjects like legal, administrative and economic history, protection of historical monuments etc. The principal advantage of this type of training as compared with the first alternative is the close connexion of theoretical lectures and practical exercises within the archives.

2.2.2 Training institutions and training courses for non-academic and sub-professional archivists

The development of professional training for the archival personnel of the non-academic categories is still in progress. Parallel to the post-graduate courses for (academic) archivists training courses for sub-professional archivists have been instituted at the archives schools at Marburg, Munich and Utrecht (Netherlands) and at the School of Documentalists at Madrid. A lecture programme of one year is combined with one or two years of practical training (partly in the archives and partly in various administrative departments). In 1970/1971 and 1973 similar two-semester courses for archives secretaries (sub-professional level) were organized by the Danish State archives administration at Copenhagen.

In the German Democratic Republic the integration of the professional training for the (academic) archivists into the University of Berlin has led to the formation of a separate Professional School for Archives Administration (Fachschule für Archivwesen), which is run by the Ministry of the Interior on the level of other professional training colleges. For the Federal Republic of Germany the replacement of the sub-professional section at the Marburg Archives School by a new professional school with a three years' curriculum is being projected. This would mean the raising of the older type of sub-professional archivists (Archivinspektoren) to a sort of second-class professional archivists (category A2 of the stratification, which is proposed in this report). As a compensation, a new career of sub-professional archives assistants (intermediate level) is being organized, and most recently a special two years' training period for this category has been instituted at the Munich Archives School. There is a longer tradition for this career in the German Democratic Republic, where archives assistants are being trained in a two year apprenticeship programme which includes seven lecture periods of four weeks each at a polytechnic (vocational) school near Potsdam, whereas theoretical lectures in the Munich programme will be limited to a period of eight to ten weeks. A similar programme for assistants and records attendants is being prepared in Denmark.

Special attention should be given to the fact, that the programmes of the Potsdam Professional School (Fachschule) includes assistant archivists for the various public archives as well as archivists for archives and records services in the administration, in different public institutions and in State owned industry. The training courses which have been or are being prepared in the Scandinavian countries also include assistant archivists and records managers for the administrative registry and archives services (departmental record officers). The same is true for some of the courses, which are offered in various universities in the United States of America. The sub-professional branch at the Madrid School of Documentalists offers a common training programme for assistant archivists, documentalists and librarians. An organizational attachment to existing library schools has been under discussion for the future professional school of (non-academic) archivists in the Federal Republic of Germany, which will offer a diversified programme for State and community archives, business archivists and archival documentalists in parliaments and other institutions.

2.2.3 Training for technical personnel

The problem of training facilities for the technical personnel may be narrowed down to the training of archival repairers, since, notwithstanding a certain degree of specialization, archival photographers may get along with a general knowledge of the various photographic and microfilming techniques, which may be acquired by way of apprenticeship or by attending one of the professional schools for photo techniques.

A large number of technicians who are working in European archival repair workshops and laboratories today started with an apprenticeship-training in book-binding implemented by additional in-service training in archival repair techniques. The larger repair laboratories are training their own personnel. Instruction for visitors is provided in the well established Conservation Section of the Public Record Office in London, which also participates in the "mobile apprenticeship programme", which is organized by the (British) Society of Archivists. Training courses are also reported for some of the archival laboratories in Eastern Europe. Individual internship training is possible in quite a few other laboratories as well. In the Bavarian State Archives a training programme with three consecutive four week courses has been developed.

A new joint training project of public libraries and archives in the Federal Republic of Germany provides a one year training course for archival and library repairers, admission being granted only to qualified master book-binders. For Great Britain the start of a two years' training programme for document repair at the Camberwell School of Arts and Crafts was announced in 1970-1971. For academic restorers (with completed secondary education) a more elaborate training programme, comprising five years of theoretical and practical studies, is offered at the Austrian Academy of Arts with its Master-School of Conservation and Technology. A systematic investigation of training facilities in the field of archival conservation and repair is yet to be made.

2.3 Scope and contents of the existing training programmes

2.3.1 Curricula for the training of professional (academic) archivists

A comparative study of archival teaching programmes may be based on the compilation of curricula in Ch. Kecskeméti's 1966 report. As far as the outward volume of the various programmes for the training of (academic) archivists is concerned, there is, surprisingly enough, no principal difference between the comprehensive university type programmes, which combine general and professional education, and some of the post-graduate programmes. The number of hours provided for lectures and practical exercises at the Ecole des Chartes and at the Moscow Institute is given as about 1200. Programmes with 950 to 1,050 hours are reported for the university institutes in Czechoslovakia, in Poland and in the German Democratic Republic, for the Vienna Institute and for the post-university training at the schools of Marburg, Munich and Madrid. A second group with 500 to 600 hours includes the courses at Budapest, Jerusalem and Coimbra/Portugal, whereas the curricula of the Vatican School, of the Dutch School at Utrecht, the Italian schools and most of the programmes which are offered in British and American universities, comprise about 180 to 300 hours.

There is almost no difference in the overall contents of the various training programmes. In their majority the programmes may be divided into three main subject groups:

(a) Archival subjects (including archival theory, archival history, registry systems and records management, archives administration, arrangement, description, etc., archival techniques, documentation and library methodology).

(b) Subjects concerning historical sources and auxiliary sciences (including bibliography and typology of historical source materials, paleography and diplomatics for mediaeval and modern times, heraldry, sigillography, chronology, numismatics, genealogy, research and editing techniques, language studies or reading of documents in various languages and scripts)

(c) Historical subjects (including first of all administrative and legal history, but also general and regional history, historical geography, economic and social history, history of art and historical monuments)(1).

In most of the programmes all three subject groups are represented, though the ratio between the number of hours devoted to the various subjects is very different (cf. Appendix II). In quite a few of the "classical" curricula 50% or more of the teaching is devoted to the auxiliary sciences. The ratio between lectures and exercises in diplomatics and paleography and those in archival theory and archives administration is 140:90 at the Vatican School, 120:60 in the schools of the Italian State archives, while the programmes at the British universities of Bangor and Aberystwyth offer 100 to 160 hours in the auxiliary sciences, 40-50 hours of archives administration and about the same number of lectures on administrative history.

(1) A rearrangement of these subjects along the lines of the comparative scheme for library, archives and documentation training, which was agreed upon in the Paris meeting of the common working group, called by Unesco in January 1974, would read as follows:

Supplementary general education	Administrative and legal history	
	Other historical subjects: General and regional history, historical geography, economic and social history, history of art and historical monuments	
	Language studies	
Professional education		
1. Basic aspects	General aspects: General principles of information and documentation	Archives: History of archives, principles of archives work, archives legislation and organization, public and private archives, research and user analysis
2. Materials	Bibliography, general typology of (historical) source materials	Types of archival materials. Diplomatics and paleography for mediaeval and modern times and other auxiliary sciences, concerning archival materials. Filing and registry systems. Maps, official print audio-visual and machine-readable records, oral sources, etc.
3. Methods	Introduction to library, museum and documentation methodology	Records management. Evaluation, arrangement and description of archival materials, including the use of automatic processes. Reference services, editing and publication
4. Management	Principles of administrative management (personnel, budget, legal aspects)	Archives administration, types of archives operations
5. Technology		Preservation and restoration, reprography and computer technology.

Among the more extensive programmes the auxiliary sciences take up 60% (660 hours) of the total teaching time at the Ecole des Chartes and 55% (464 hours) at the Vienna Institute, with the main weight being put on the mediaeval sources. At the schools of Marburg, Munich and Potsdam 315 to 350 hours for mediaeval and modern paleography, diplomatics, "Aktenkunde" etc. represent about 30 to 35%. In the Paris and in the Munich programme second place is given to administrative and legal history (300 to 330 hours). For archival theory, archival history and archives administration the Vienna Institute and the Ecole des Chartes provide only 60 to 64 hours (for Paris with an additional 70 hours at the Stage Technique!). In the Munich programme the archival subjects take about 160, at Potsdam 240 and in the Marburg curriculum more than 300 hours. Lectures on historical geography and regional history are scheduled with 30 to 100, those on economic history with 30 to 80 hours. Among the "classical" programmes the best balanced ones seem to be those of Marburg (with about 1/3 for archival subjects, 1/3 for auxiliary sciences for mediaeval and modern times and 1/3 for historical subjects) and of the Moscow Institute (with 420 hours for archival subjects, 440 for the auxiliary sciences and 280 for administrative and legal history).(1)

Programmes of a more "modern" type are reported for the School of Documentalists at Madrid and for the Hebrew University at Jerusalem. The Madrid programme reads as follows:

(a) Common subjects (for archivists and librarians):

Classification systems	96 hours
Typology of documents	64 "
Administration and legislation of archives and libraries	96 "
Documentation	96 "
Research methods	64 "
General bibliography and reference works	96 "

(b) Special subjects for archivists:

General archives studies	96 "
Finding aids, description and editing	96 "
History and evolution of archival documents	64 "
Special problems of archives administration	64 "
History and evolution of the script	96 "
Modern archives	64 "

The Jerusalem programme, which is sponsored by the Israeli Association of Archivists, also contains a certain amount of library techniques:

(a) Archival subjects:

Archival theory and archival history	70 hours
Records administration	30 "
Archives administration	120 "
Preservation and restoration of documents	20 "
Reprography	20 "

(1) In the comparative figures given above and in the following curricula an attempt has been made to co-ordinate existing differences as far as the meaning of "hours" is concerned. The "hour" of teaching is normally supposed to represent a lecture of 45 minutes, though in some cases it may also designatea full hour of 60 minutes or an even longer lecturing period. Practical exercises and seminars are not always indicated in the published programmes.

(b) Library subjects:

Cataloguing techniques	30 hours
Classification methods	25 "
Preparation of bibliographies and indexing	10 "

(c) Auxiliary sciences:

Diplomatics and paleography	70 "
Historical bibliography	20 "
Editing of texts	30 "
Genealogy	10 "

(d) Historical subjects:

Legislation	30 "
Administrative history	60 "

A programme with alternative versions for "classical" and "modern" archivists was initiated by the School of Library, Archives and Documentation Studies, University College, London, in October 1970. The partition of the syllabus into compulsory and optional subjects offers quite a number of choices including a special curriculum for business archivists and another variety which tries to meet the needs of archivists from overseas countries. The latter was, in fact, one of the principal objectives of the reform. The following lecture courses are advertised:

I. Compulsory subjects

(1)	Record office management	27 hours
(2)	Records management	16 "
(3)	Preparation of finding aids	15 "

II. Optional subjects

(1)	Administrative history (English) to 1,800	20 "
(2)	Administrative history (English) from 1,800	15 "
(3)	Administrative history, overseas	30-35 "
(4)	Reading and interpretation of documents (English), mediaeval (including translations from Latin)	30 "
(5)	Reading and interpretation of documents (English), modern	30 "
(6)	Reading and interpretation of documents, foreign languages	30 "
(7)	Description of mediaeval records	23 "
(8)	The law of real property post 1922	30 "
(9)	Local government organization	36 "
(10)	Historical and bibliographical sources, England and Wales	36 "
(11)	Historical and bibliographical sources, overseas	36 hours + seminars
(12)	History and development of company law and accounting	?
(13)	History and literature of science and technology	23 hours + seminars
(14)	Information studies (including the use of computers)	23 hours + seminars

The individual curriculum includes the three compulsory courses and six options from Part II. A curriculum for the modern section of a county record office might include the options 2, 5, 8, 9, 10 and 14, a programme for business archivists 2, 5, 8, 12, 13, 14 and the combination of the compulsory subject with numbers 2, 3, 5, 11, 12 or 13 and 14 would be a possible choice for the training of archivists from developing countries.

2.3.2 Curricula for the training of non-academic and sub-professional archivists.

The description of the professional functions, which are allotted to the assistant personnel, covers the same fields of archival activities, which appear in the functions of the (academic) archivist. In consequence thereof the subject contents of the training programmes for the non-academic and sub-professional categories of archival personnel are about the same as for the (academic) archivist. The duration of the lecture periods shows the same degree of variation as the programmes for (academic) archivists, which have been discussed in the previous chapter: 170 hours, taught on 35 days within a training period of 14 months, for archivists (II) at the Dutch Archives School at Utrecht, two semesters of three months each with a total of 360 hours in Copenhagen, one academic year with 480 hours of teaching in Madrid and about 1,350 hours in a three semester curriculum for the new programme, which is being developed for non-academic diploma-archivists, at the Marburg School. The grouping into archival subjects, historical subjects and auxiliary sciences recurs, though the latter normally take a smaller part than in the academic programmes, with little or no reference to mediaeval sources (cf. the survey in Appendix III).

The Dutch programme provides for:

(a) Archival subjects

Archival theory, archives administration, record keeping and classification methods	70 hours

(b) Auxiliary sciences

Paleography of Dutch texts; early Dutch language and chronology	60 "

(c) Historical subjects

Survey of Dutch history	30 "
Legal and administrative history	10 "

The teaching programme for Danish Archives Secretaries (sub-professional level) consists of:

(a) Archival subjects

Archival history and archives organization	25 hours
Registry systems and archival classification	30 "
Evaluation, arrangement and description of archival records	25 "
Archival techniques	25 "

(b) Auxiliary sciences

Bibliography and reference works	25 "
Paleography (reading of scripts)	45 "
Other auxiliary sciences	15 "
Language studies (administrative German)	20 "

(c) Historical subjects

Danish history	50 "
Political science	20 "
Administrative history	80 "

Both programmes give a somewhat simplified version of the "classical" programmes for (academic) archivists, which is clearly oriented towards the historical archives. This is also true for the rather ambitious draft curriculum for the new diploma course at the Marburg Archives School. In spite of the including of some "modern" subjects like documentation methods, automatic data processing or introduction to sociology, there is an obvious tendency to approach the training for the new type of non-academic diploma archivists even more than before to that of the traditional (academic) all-round archivists, a tendency which becomes most evident in the strong position of auxiliary sciences and language studies, which include more than 100 hours of Latin and reading of Latin documents. Archivists with this sort of training are certainly well qualified to assist and relieve the (academic) archivists in all fields of archival activities and to occupy independent positions as heads of smaller archival agencies (community, church or university archives). The new programmes, which have just been approved by the Council of the Marburg School, would run as follows:

(a) Archival subjects

Principles of information sciences and archives studies, organization and archives administration	54	hours
Archival history	48	"
Archives legislation, legal aspects	18	"
Registry systems, records management	108	"
Arrangement and description	126	"
Audio-visual archives, expositions	27	"
Documentation methods, automatic data processing	72	"
Library methods	9	"
Archival techniques	36	"

(b) Auxiliary sciences

Historical sources	36	"
Diplomatics and paleography (mediaeval), chronology, sigillography, etc.	45	"
Latin and reading of Latin documents	109	"
Forms of modern documents and script	72	"
Reading modern German documents	45	"
French or English and reading of French or English documents	109	"

(c) Historical and administrative subjects

General and German history of modern times	90	"
Regional history and historical geography	54	"
Administrative and legal history	72	"
Economic and social history	54	"
Ecclesiastical history (and law)	18	"
Historical monuments	36	"
Introduction to sociology	18	"
Introduction to public law (including local government and civil service regulations)	36	"
Introduction to economics and public finance	44	"

The plans for the organization of the new course provide for a first section of historical introduction with the main bulk of the historical subjects and language studies, which are to be taught in co-operation with Marburg University, while the second and third semester are reserved to the more professional parts of the programme. In addition about 250 hours of administrative subjects are to be

administered in regional administrative schools before or after the Marburg course, which covers only one half of the whole training period of three years.

The teaching programme of the Professional School for Archives Administration at Potsdam (German Democratic Republic) wants to produce assistant archivists with special training for modern and contemporary records, for service in the respective sections of the State archives, but also in administrative and business archives. According to a general outline, which was published a few years ago, the programme for the two years of theoretical studies is divided into basic or general subjects and professional subjects. The first subject group includes political science (principles of Marxism-Leninism), physical education, German language, Russian and a second foreign language, socialist ergonomics (work science), (Marxist-Leninist) methods of leadership and organization, methodology of archival work, electronic data processing and German history (including administrative, economic and social history). The professional studies are concentrated on records and archives administration with about equal weight on the problems of current records (administrative documentation) and archival holdings. Subjects like script and documentary forms are limited to the nineteenth and twentieth centuries.

Different again is the programme of the Spanish School of Documentalists at Madrid, which on the sub-professional level offers a common curriculum for documentalists, archivists and librarians. The teaching programme covers the following subjects:

Archives administration	80 hours
Library administration	80 "
Terminology, classification and history of science	80 "
Cataloguing methods	48 "
Classification methods	48 "
Documentation	48 "
Bibliography and reference services	32 "
History and techniques of documents	32 "
Administrative practice	32 "

The goal and result of this training is obviously not a second category of historian-archivists, but an executive documentalist, whose qualifications are limited to the technical processing of archival and library documentation.

A non-historic training of this kind would be quite feasible for archives assistants and records attendants of the lower grades, though the library subjects would have to be replaced by a very thorough treatment of the methods of administrative records keeping and registry services. The archives assistants, who are employed at the Federal Archives at Koblenz, are actually formed on the basis of a common training programme for various administrative branches. Other training programmes for the lower categories of archival personnel offer a somewhat reduced version of the academic and non-academic curricula with an obvious bias towards the historical archives tradition. One example of this kind is the projected programme of a 145-hour curriculum for Danish "arkivbetjente", which provides for:

Danish history	50 hours
Administrative history and present administrative organization	50 "
Reading and interpretation of documents (eighteenth to twentieth centuries)	20 "
Bibliography and reference works	25 "
Archival techniques	20 "

In the training for archives assistants in the German Democratic Republic the syllabus for the seven months of theoretical instruction covers a choice of general subjects in the fields of history and political science (general history and sociology, historical and economic geography, political economy and political science) and of subjects connected with the forms and organization of administrative documentation (records administration, forms of documents, paleography of the last centuries and electronic data processing). The theoretical introduction to archival theory and archives administration is supplemented by a practical introduction into the various fields of archival activities.

2.3.3 Training programmes for technical personnel

For the training of archival technicians, especially restorers and document repairers no satisfactory curricula seem to be available at the moment. Programmes and organizational patterns for the training of technical personnel for archives (and libraries) should be worked out with the assistance of Unesco and the ICA/IFLA steering committee.

3. Training institutions and training programmes for the developing countries

3.1 Introductory remarks

The survey of existing curricula has shown a growing interest in organized training programmes for the various categories of archival personnel. In spite of the incorporation of modern professional problems like records administration and archives techniques into the more recent programmes, the predominance of the "classical" conception of the historical archives is quite evident. Actually most of the State archives in Europe are preserving archival holdings, which go back into the Middle Ages, though here too, the portion of archivists, assistant archivists, assistants and attendants, who are working primarily or solely on contemporary records, is steadily increasing.

Training programmes for the developing countries have to be based on a somewhat different conception. In most of these countries the amount of historical records, which go back beyond the middle of the nineteenth century, will be extremely small, so small, that they may be neglected in the general planning of archival training. This does not mean, that the historical element is to be completely discarded. One function of a national archives service will always be its rôle as a centre of research on national and regional history, and even the most recent administrative records will shortly become objects of historical inquiries. The archivist has to be familiar with historical methods and with the development of historical research, so that he may evaluate and select the records which are to be preserved for the future.

"The rôle of archives in the public administration of developing countries", as put forward in the Valette and Verhoeven reports, calls, however, for programmes of archival training which will qualify the future archivists for their administrative functions as well. In Europe the archives can draw, to a certain extent, on the historical tradition of archives and records administration, though even there, new developments are calling for a modernization of archival methods and techniques. In many Asian and African countries a tradition of records and archives administration is yet to be built. It will be up to the archivists to provide for an efficient organization of current records in the administrative departments which will insure an effective service to the administration itself and which, at the same time, will lay the basis for the future reduction of the masses of administrative papers into a conclusive and well arranged archival documentation.

3.2 Training needs for the various categories of archival and technical personnel

3.2.1 Post-university training for (academic) archivists

Top priority in the training of archival personnel for the developing countries is to be assigned to the training of (non-academic) assistant archivists on the graduate level, which is dealt with in Section B of this chapter. In the leading category (A1) of archivists with an (advanced) university degree quite a few of those now in office took their university studies and additional professional training (regular training courses and/or archival internship training) in various countries of Europe, North America and Australia. Exceptions are India, Argentina and some other Latin American countries, where training programmes of various levels have been in operation for some time. Training courses at the New Delhi school have been attended by several archivists from other countries in Asia.

The transfer of the general studies to the advancing regional universities, which often offer special research programmes for regional history, poses the question of local possibilities for advanced professional training. The proposed personnel structure for new archives administrations in the developing countries provides only relatively few leading posts for archivists of this top category, so that the actual demand will not allow for specialized post-university training institutions with a regular sequence of annual courses. It has been proposed, however, to create a one year curriculum for archival training at the post-university level in connexion with the regional training centre at Dakar, which is primarily designed for the training of assistant archivists. The solution might be that a programme be established with courses organized on request (according to the number of applications) at intervals of two or three years.

Nevertheless, it would be quite useful to provide for a continuation of international and bilateral fellowships and travel grants for additional training (or refresher courses) in European and other countries. The rôle of the leading archivists in the organization and promotion of historical research for their home countries necessitates a thorough knowledge of the former metropolitan countries and their organizational practice. But it is certainly true, that short visits to other archival institutions and the exchange of practical experience will be more fruitful after professional training, and should be adapted to the specific needs of archival work in the respective region.

3.2.2 Training centres for assistant archivists

The key rôle for the build-up of new archives administrations in the developing countries has been assigned to the assistant archivists (category A2), who combine a completed secondary school education with a thorough training for the archival profession. The creation of training facilities for this group is the main problem of archival training for the developing countries. Though a full-fledged national system of archives and records administration will employ a relatively large number of assistant archivists at this level (in the national archives, in regional and intermediate repositories and as record officers in the various administrative departments), it would be impossible and impractical to establish a separate training institution for every single country. On the other hand, it seems equally impossible to transfer the necessary training to the existing institutions in the metropolitan countries, whose training programmes are only partly adapted or adaptable to the specific needs of the developing countries.

There are certainly problems which are specific to a particular country, but, on the whole, the uniformity within certain regions is large enough to form a basis for regional training co-operation. In Europe, along these lines, a common training centre for (academic) archivists in the Scandinavian countries has been discussed for some time. In Africa the regional training centre at Dakar for the French-speaking countries offers an excellent example, which should be copied for other regions. The establishment of a similar training institution for the English-speaking countries of Africa at Accra is in progress, and for Latin America and South East Asia existing training courses at Cordoba, Argentina and Kuala Lumpur, Malaysia are scheduled for transformation into centres for the surrounding regions. The formation of such training regions is not so much a question of geographic neighbourhood, but of common traditions in the realm of general history, in the administrative system, in the methods of records keeping and, to a certain extent in the administrative language. This accounts for the separation of French and English-speaking countries in Africa, with each group being formed on the basis of a common background of (colonial) administrative traditions.

Planning for the training of assistant archivists should be continued along the lines of this regional training-centre project, which has produced the first positive results at the Dakar school. The scheme has to be completed to cover all regions (including the Arab countries and all of Latin America). Future development will have to show whether, with the expected increase of personnel demands, the number of centres will have to be enlarged since classes should be limited to about 20 to 25 students at the utmost. The third class at the Dakar school consists of 16 trainees from nine different countries.

3.2.3 Sub-professional personnel

An additional task, the solution of which is essential to the proper functioning of the new archives services, is the organization of training facilities for sub-professional personnel. The criteria for personnel planning, which were developed earlier in this study, will call for a broad basis of trained personnel in the lower categories. Archives assistants and records attendants are needed for the central archives, for regional and intermediate archives repositories, but most of all for archives and records services in the various administrative departments, where the main bulk of practical records management work is to be accomplished by officers of the intermediate level.

Once a system of archives and records administration will have been organized, the training of additional personnel may be left to a large degree to in-service or internship training. Theoretical instruction might be limited to about three to four months, which may be split into two or three lecture periods. Theoretical lectures and practical exercises under expert guidance should insure a common basis for the work in archives and registry services, provide the necessary amount of uniformity and ease the functional contacts between the central archives agency and the records services in the administrative departments which is essential to a successful operation of the whole system.

It would probably be too expensive to concentrate all of the theoretical training for the sub-professional personnel at the regional training centres. Nevertheless, at least for the early stages of development the regional gathering of sub-professional trainees for at least one period of seminar training at the training centres (four to six weeks) would be desirable. The rest of the lecture periods may be organized within the frame of the individual States, either at the national archives or at an existing administrative or professional (vocational) school. For the beginning phase, foreign experts or lecturers from the training centre might be engaged to participate in the training, and countries where an immediate organization of local courses is impossible might join up with a larger State in the vicinity.

A recent example for courses of this kind was furnished by the seminar courses for archives and records personnel, which were held at Bamako, Mali under the auspices of the German Friedrich Ebert Foundation in 1971 and 1972. Participants at the two courses of four weeks each were about 300 archives and records assistants from various administrative departments and State-owned business corporations. Lectures were given by expert archivists and documentalists, including a German guest lecturer and the Director of the Senegal National Archives, who is also teaching at the Dakar training centre.

3.2.4 Technical personnel

Due to unfavourable climatic conditions, the need for restoration and repair of archival documents is much more urgent in the tropics and sub-tropics, than it is in the temperate regions of Europe and North America. The training of qualified document repairers is, therefore, of primary importance to the archives in developing countries. Inasmuch as bilateral or international training scholarships were available, a certain amount of in-service training has been offered at the archives laboratories in London, Paris and New Delhi, where special attention is given to research and practical training for archival repair.

The large restoration laboratory at the Indian National Archives at Delhi might be the adequate basis for a training centre for document repairers for all of Asia. A second model laboratory with training facilities would have to be created in Africa, perhaps in connexion with one of the regional training centres. Other than the methods of records management and archival arrangement, archival repair techniques for tropical countries are not dependent on the specific traditions of anglophone or francophone countries, so that one common centre for all of Africa would be sufficient. A thorough training programme with theoretical lectures on the basic principles or archival conservation and restoration, with methodical demonstration and practical exercises, should take about two years. Expert repairers with a training of this sort might afterwards organize the training of the necessary auxiliary personnel in the form of a local in-service apprenticeship system. At least on the local level, co-operation with the library book-binding and repair shops should be helpful. The need for the development of programmes and organizational patterns for training in this field with the assistance of the competent international agencies has been stressed somewhat in this paper.

3.3 Organization of regional training centres

The central rôle in the future organization of archival training in the developing countries is to be played by the regional training centres. The first "pilot project" for this type of archival training institution is the Archives Section at the School of Librarians, Archivists and Documentalists (EBAD) at the University of Dakar, Senegal, which was founded with the assistance of Unesco and UNDP in 1971. Similar centres at Accra and Kuala Lumpur are scheduled to start working in 1974.

The Dakar centre may be used as a model case for similar projects. It is certainly advisable to place training institutions of this kind in the context of or in close connexion with a university, which will furnish the general administrative framework and at the same time add to the academic prestige of the professional training institution and its diploma. Among others, the problem of living accommodations for trainees from foreign countries will be easier to solve this way. On the other hand, to avoid the disadvantages of some of the university-affiliated training institutions in Europe, all archival training centres should be located close to a well developed archival repository of sufficient quality which may furnish the necessary facilities for practical exercises and internship training in the various archival activities. Both of these conditions are fulfilled in Dakar as well as in Accra, where the second centre is to be situated.

Another question is the combination of training institutions for archivists, librarians and documentalists. It is certainly essential to formulate a clear conception of archives, archival functions and archivists as distinguished from the neighbouring professions of librarians and documentalists. There are, on the other hand, quite definitely a lot of common elements in all three professions. It has been pointed out in the previous chapters of this study, that the combination of archives and library training has a long tradition, which goes right back to the foundation of the "Ecole des Chartes" in 1821. Modern examples are the London School of Library, Archives and Information Studies and the School of Documentalists, Archivists and Librarians at Madrid. The model to be followed would be not so much the uniform sub-professional curriculum of the Madrid school, but the Spanish post-university training programme for archivists and librarians with its element of core courses which are common to both careers, and additional subjects, which are specialized according to the specific professional needs of either group.

The inclusion of the Archives Section into the existing School of Librarians and Documentalists at Dakar has insured a stabile organizational basis for the new archival training. A similar connexion with the Department of Library Sciences at the University of Ghana is projected for the new Accra centre, and for Kuala Lumpur the parallel founding of a library school is under consideration. Going beyond the mere administrative addition of various professional sections within the frame of one larger institute, there are certain subjects, which allow for a rational co-ordination of the teaching programmes for the different sections. This would be true for subjects like introduction to sciences and general history, historical and political geography, methods of classification, documentation and information, bibliography and reference works, handling of official print and newspapers, electronic data processing, public relations, administrative practice or the introduction to repair and photo techniques. Several of these "common" subjects are included in the "general culture" section of the syllabus, which is actually practised at Dakar. Contacts between trainees of the various sections, which ensue from the participation in a partly common training programme may serve to improve the understanding for the interrelationship of the various professions and thus lay a basis for future professional co-operation, which may be useful and mutually profitable to the institutions concerned.

The establishment of regional centres for archival training in connexion with a university and possibly with a school for librarians and documentalists will at the same time facilitate the problem of teaching staff. Normally one or two full-time lecturers for the archives section should be fully sufficient. The qualifications of these lecturers, who would have to be senior (academic) archivists, should combine a thorough knowledge of archival theory and practice with the necessary amount of professional experience. The addition of a training centre for document repairers would require a further expert lecturer with the scientific qualification for research and teaching in the fields of conservation and restoration. Some of the more general subjects may be taught on a part-time basis by the teachers of the library and documentation section, by the professors of various other university departments (History, Political Science, Law and Economics) and by qualified senior archivists of the adjoining archives repository, who at the same time are to be entrusted with the organization of practical exercises in their repository.

The teaching programme should provide for the supplementary invitation of experienced archivists from neighbouring countries to give guest lectures. For the starting period a certain amount of the teaching might have to be furnished by foreign experts. Thus, the Unesco programmes for the Dakar and Accra schools include the seconding of archival expert lecturers from abroad, who, during the first years, serve as directors of the Archives Section, until a qualified successor from the region may take over. Besides the personnel costs for foreign experts the aid programmes for the new centres include the necessary equipment and a certain amount of scholarships.

3.4 Recommendations for training curricula

Discussion on curriculum planning for the archival training in developing countries should start with the archival syllabus of the Dakar school (EBAD), which has been in operation for three years. In the following list the Dakar curriculum is arranged in the grouping, which was used for the European training programmes in the earlier chapters of this study. The Roman numbers (I, II) indicate whether courses are taught in the first or second year of studies.

(a) Archival subjects

Archival theory and archival history	46 hours	(I)
Registry services, records management	50 "	(II)
Arrangement and description of archives (introduction)	20 "	(I)
Archives administration and management of archival records (with practical exercises)	140 "	(II)
Archival techniques	40 "	(II)
Documentation	24 "	(II)
Oral sources	14 "	(II)
Library administration and cataloguing methods	66 "	(I)

(b) Historical subjects and auxiliary sciences

General bibliography and bibliography of (African) history	38 "	(I/II)
General history of civilization	24 "	(I)
Historical geography (of Africa) and cartography	20 "	(I)
Administrative history	74 "	(I/II)
Introduction to the history of ideas, sciences and techniques	16 "	(I)
History of (African) art	20 "	(I)
Other historical disciplines	20 "	(I)
Law	24 "	(I/II)
Language studies (foreign language)	24 "	(I)
Typewriting	24 "	(I)

In the archival subjects the programme seems to be equivalent or even superior to most of the European programmes for the assistant archivist level (cf. the confrontation in Appendix III), though in the published version there is no detailed description of the main parts "Administration des archives" and "Documents et leur traitement aux archives" (70 hours each). If not comprised in these subjects, a special course on "Reading and interpretation of administrative documents" (including manuscript documents) should be added to the programme. The problems of audio-visual records might be combined with the course on "oral sources". In the group of historical subjects an additional course on economic and social history is recommended. The necessary treatment of modern administrative problems, administrative legislation and organization, is probably part of the courses on "law" and administrative history, though a supplementary introduction to administrative practice (including budgetary questions) should be useful.

The proposed amendments to the existing Dakar curriculum might be used to expand the present programme into a three year course, which is deemed desirable to insure the necessary degree of professional qualification. In accordance with similar tendencies in the library field, all diploma courses for the assistant archivist level should be designed to meet general graduate standards, which would normally necessitate a programme of three years.

Due to the higher educational level of available training candidates in English-speaking Africa, the basic archives course at the projected Accra training centre will be arranged on the post-graduate level, requiring a bachelor's degree as entering qualification. The provisional syllabus, therefore, is limited to the strictly professional subjects. "Major subjects" of the proposed one academic year programme are to be:

Records management (record keeping and registry systems from the colonial period onward; practice of records management and records retirement with special reference to experiences in Europe and America; administrative usage of modern types of technical documentation);

Archives administration (including archival theory, history of archives and archival development in tropical Africa; international activities in the archival field; archival legislation, public and private archives; management of archival records, arrangement and description, editing and publication, reference services, public relations; special problems of cartographic, audio-visual and machine-readable records, oral sources; archival techniques, building, restoration and reprography);

Administrative history (administration and administrative agencies in the colonial period, including local government and native authorities; constitutional and administrative development since independence, organization and functions of central, regional and local government, public corporations and parastatal bodies).

As "subsidiary subjects" the draft curriculum proposes "African history", which should include the treatment of social and economic history, and "Basic library methods and techniques", which are to be taught by the Professor of Library Studies.

The planning for the third centre at Kuala Lumpur provides for a relatively short training period of one academic year (8 months), which will also start from the bachelor's level. The teaching programme is to contain core courses on the various aspects of records management and archives administration and subsidiary lectures on public administration and South East Asian history and culture. The theoretical instruction is to be accompanied by practical work in the National Archives of Malaysia. Like the Dakar programme thedraft curriculum for the Accra centre provides for "general" and "individual internship training" as vital part of the professional education. The internship programmes should include at least one month of records management training in administrative departments.

A curriculum for the training of leading (academic) archivists with an advanced university education would have to concentrate on the "major subjects" of the Accra syllabus, though the emphasis would have to be altered. The amount of practical exercises in the fields of record keeping and records management could be reduced. On the other hand the curriculum would have to deal more thoroughly with the problems of older manuscript records (from the eighteenth or nineteenth century respectively). The treatment of archival history and archives organization should include the history and present organization of archives in other parts of the world, including archival holdings with relevance to the developing regions, which are conserved elsewhere. Additional attention should be given to problems of administrative management, budget planning, personnel guidance, etc. A one year curriculum of this kind would have to include about 500 hours of lecturing and seminar courses plus a certain amount of practical work.

Training programmes for sub-professional personnel (archives and records assistants) should put the main weight on internship training in the archives and possible various administrative departments. There ought to be at least one year (or 18 months) of practical training, interspersed with periods of theoretical instruction, which altogether should amount to about 200 hours. Lectures and seminar courses would have to cover the theory and practice of record keeping, of registry systems and records retirement, the preparation of records for transfer, the handling of records in the archives including the fundamentals of arrangement and listing techniques for various types of archival records. To provide a general background, survey lectures should be added on general and regional history and on the administrative organization and its historical development.

The last four week seminar programme for archives and records assistants at Bamako (Friedrich-Ebert Foundation) comprised theoretical and practical instruction in the following fields:

(a) Lectures:

Records management: current and non-current records	8	hours
Archives administration: general principles, rôle of archives in public administration, records transfer, review and destruction, arrangement and description	13	"
Archival techniques: conservation, restoration and reprography	19	"
Documentation	8	"
Library methods	21	"
Administrative history	16	"

(b) Practical exercises:

Records and archives administration: in the National Archives and in various administrative departments	57	"
Documentation	4	"
Library methods	6	"

3.5 Re-orientation and continuous training

The establishment of a system of regional training centres with regular training programmes for the various categories of archival personnel, including document repairers, will be the main objective of development planning, as far as archives personnel is concerned. For the time being, however, quite a few of the archives and records services in developing countries are employing personnel with non-archival training, that is, qualifications in the fields of general administration, library and documentation methodology, or with no regular professional training at all. For a transition period it might be considered to project re-orientation courses of one or more periods of four weeks each, which would have to provide basic instruction in the "major subjects" of archival training.

In the Federal Republic of Germany similar courses are arranged by an Administrative School at Duisburg for executive and clerical officers, who are charged with the administration of town and community archives and records services. The school offers two alternatives for executive grades (four months) and for senior clerical staff (two and a half months). Both courses are held at intervals of about three years, according to the number of applications. At the Marburg Archives School shorter seminar courses are held for business and church archivists. It is a question, whether re-orientation courses of this kind for the developing countries should

be attached to the regional training centres or whether they would be easier to arrange on the national scale. To a certain degree the model of the Bamako seminars (see p. 55 and 64) could be utilized for this kind of training as well.

Another problem is the organization of follow-up courses for professional personnel in the various categories. It is certainly advisable to provide for some sort of continuous training, so that connexions with the scholarly development of archival theory and practice do not end abruptly with the acquisition of the archives diploma. In countries with an advanced organization of archives and records services this task is taken care of by the professional associations of archivists and records managers, which organize annual congresses with conferences and discussions on new developments and special aspects of professional work or additional seminar courses for advanced training. For the countries in the developing regions similar tasks may be fulfilled by the regional branches of the International Council on Archives (SARBICA, EARBICA, etc.), which in this field would have to co-operate with the regional training centres. It should be one of the tasks for Unesco and for the International Fund for Archival Development, which is to be founded, to assist in the organization of regional professional congresses and seminar courses. Furthermore, scholarships and travel grants should be supplied to enable occasional study tours of qualified archivists and assistant archivists to other countries, including the participation in international congresses and sessions of the Table Ronde des Archives.

A co-ordination of supplementary training courses for archivists, librarians and documentalists is feasible and advisable in the field of modern information science, mechanization and automatic data processing. Though the utilization of data processing and retrieval methods for archival purposes is still in a rather preliminary stage, a number of positive results are already being reported from various countries. Long-term development plans for archives services will have to include the use of automatic processing, which will have to be effected in close co-operation with other services in the related fields of information and documentation as far as methods and personnel training are concerned.

APPENDIX 1

Personnel structure in various archives services

	Austria State Archives	Denmark State Archives	England Public Record Office	France National Archives	Germany (Fed. Republic) Federal Archives	India National Archives	Malaysia National Archives
A: Archival Personnel							
Cat. 1: Archivists	25 /19%	42 /26%	22 /6%	80 /26%	34 /12%	32 /7%	10 /9%
Cat. 2: Assistant Archives			8 /2%	4 /1%	34 /12%	59 /13%	8 /7%
	22 /17%	12 /7%			51 /18%		
Cat. 3: Archives Assistants			81 /22%	48 /16%		11 /2.5%	22 /21%
Cat. 4: Records Attendants + Messengers	23 /18%	23 /15%	72 /19%	75 /24%	39 /14%	71 /15.5%	21 /20%
B: Technical Personnel (Restoration + photography)	11 /9%	16 /10%	113 /30%	44 /14%	47 /16%	106(1) /24%	20 /19%
C: Administrative Personnel (Administration, clerical staff, maintenance)	48 /37%	67 /42%	78 /21%	60 /19%	81 /28%	172 /28%	25 /24%
Total:	129	160	374	311	286	451	106
Archival holdings (in kilometres of shelving)	?	160	105	200	34	25	8

(1) 23 of these are technical experts with university degrees.

APPENDIX 2

Curricula for the training of (academic) archivists, university and post-university level

	Austria (Vienna)	England (Aberystwyth)	England (London, modern)	France (Ecole des Chartes)	Germany (Fed.Rep.) (Marburg)	Germany (Bavaria)	Germany (Dem.Rep.) (Potsdam)	Israel (Jerusalem)	Spain (Madrid)	USSR (Moscow)
Archival subjects:										
Archival theory, archival history	64	48		60	40		30	70		188
Registry systems, records management			16		50	127	60	30	544	68
Archives administration			42	(70)	100		150	120		152
Archival techniques					48	35		40		
Information + documentation			23		60				96	
Library methods	32			60	8			65		
Museum methods	32									
Auxiliary sciences:										
Bibliography, historical sources			36	240			15	50	160	152
Diplomatic + paleogr. (mediaeval)	320			240	72	110	130	70	160	
Documentary forms, paleogr. (modern)	64	162	30		144	170	185			220
Heraldry, sigill., genealogy, etc.	80				36	50		10		
Language studies, reading of texts				180	96		75			68
Historical subjects:										
General + regional history, hist. geogr.	112				72	30	75			
Administr. + legal history	64	45	81	300	180	333	190	90		158
Econ.+ social hist.	32				48	80	45			
History of art, historical monuments	64			60	48					
Total:	864	255	228	1140	1000	935	955	545	960	1006

APPENDIX 3

Curricula for the training of assistant archivists

	Denmark (Copenhagen)	Germany (Fed.Rep.) (Marburg, new programme)	Germany, Bavaria (Munich)	Netherlands (Utrecht)	Spain (Madrid)	Regional training centre Dakar
Archival subjects:						
Archival history	23	48	18	5		46
Registry systems, records management	30	108		65	48	50
Archival theory, archival administr.	25	225	103		112	160
Archival techniques	26	36	22			40
Information + documentation		72	6		48	38
Library methods		9			128	66
Auxiliary sciences:						
Bibliography, reference works	25	36			112	40
Diplomatics + paleography (modern)	61	172	70	35	32	20
Heraldry, sigill., genealogy, etc.			18	4		
Language studies	20	218		20		24
Historical subjects:						
Gen.+ regional history	50	144		32		60
Administrative history	80	108	63	10		74
Econ.+ social history		54				
History of art		36				20
Political science	20	98				26
Total:	360	1364	300	171	480	664

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RECOMMENDATIONS

The following recommendations were agreed upon in a consultation with archivists, librarians and documentalists, held in Paris upon invitation by Unesco at the end of January 1974:

1. Planning manpower resources and forecasting future needs should be considered at the national level by the appropriate government agency in consultation with the profession and other interested bodies. Regard should be had to international and other appropriate standards and practice where these are applicable.

2. For this purpose we recommend that the appropriate government agencies should undertake or promote regular manpower surveys for the different levels of professional and non-professional personnel in library, archives and information services, following the standards set by the Unesco censuses of documentation, library and archives staff.

3. We recommend that based on these surveys national programmes for the education of professional personnel should be established as the principal means of supplying adequate numbers of professional staff for libraries, archives and information services. We recommend that these professional education programmes should be seen as an ongoing national commitment.

4. We recommend that training programmes for high-level professional personnel should be undertaken where possible. This can be usefully supplemented by the international exchange of professional experience and by the invitation of experienced teachers from other countries.

5. Professional education in the fields of libraries, archives and information services should be situated in universities or equivalent institutions of higher learning. For the training of professional archivists the site of the training centres should insure ready access to large archives.

6. We propose that basic professional curricula should be formulated at a level consistent with that of other university programmes of graduate/standing.

7. We recommend that there should be suitable courses for sub-professional/paraprofessional staff, which should be normally organized in middle-level (vocational) training institutions, but which may be given at schools of university status where this is necessary.

8. We recommend these programmes on the professional and sub-professional level should not only include initial courses and advanced studies but also specialized short-term re-training courses for those, who having previously undertaken other kinds of work wish to transfer to archival work (including records management).

9. We recommend the establishment of training centres for technical (conservation) personnel in archives, libraries, museums and information services and the development of an appropriate curriculum.

10. Provision should be made for post-experience courses and seminars to enable the professional and sub-professional personnel to continue their education, to exchange experiences and to increase their professional competence.

11. We recommend that appropriate status should be accorded to professional personnel in the field of libraries, archives and information services, appropriate to the level of education and in line with other professions of equivalent standing.

12. We recommend that there should be suitable administrative machinery for overseeing professional standards of recruitment, professional education and practice, either by a professional association or by a government or similar official agency.